

GE 159 Plastics Avenue Pittsfield, MA 01201 USA

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June 8, 2005

Mr. William P. Lovely, Jr.
United States Environmental Protection Agency
EPA New England (MC HBO)
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: Floodplain GE-Pittsfield/Housatonic River Site

Floodplain Residential and Non-Residential Properties Adjacent to 1½ Mile Reach of Housatonic River (GECD710 and GECD720)

Addendum to Removal Design/Removal Action Work Plan for the Group 3A and 3B Floodplain Properties

Dear Mr. Lovely:

On April 14, 2005, the General Electric Company (GE) submitted to the United States Environmental Protection Agency (EPA) a document titled Removal Design/Removal Action Work Plan for the Group 3A and 3B Floodplain Properties (RD/RA Work Plan). EPA provided conditional approval of that work plan in a letter to GE dated May 26, 2005. As directed in the conditional approval letter, EPA's comments were to be addressed in an Addendum to the RD/RA Work Plan (Addendum). This letter serves as that Addendum and provides GE's responses to the comments contained in EPA's conditional approval letter, as set forth below.

EPA Comment No. 1 – EPA has reviewed the data set forth in the post-remediation tables in Volume II of the Work Plan. Although those data indicate that the PCB Performance Standards will be met, GE shall consider expanding the excavation limits shown on Technical Drawings 5 and 6 of the Work Plan based on constructability and related factors.

<u>GE Response</u> – GE has expanded the excavation limits within the Group 3A and 3B floodplain properties based on constructability and related factors. The revised excavation limits are shown on the revised Technical Drawings 5 and 6 provided in Attachment A.

EPA Comment No. 2 – The derivation of a Method 2 Soil Standard for sulfide as described in Appendix E of the RD/RA Work Plan does not appear to have taken into consideration odor threshold and leaching potential to groundwater. GE shall provide an explanation as to why only direct contact was taken into consideration in deriving the standard.

<u>GE Response</u> – Attachment B to this letter expands upon the information provided in Appendix E to the RD/RA Work Plan regarding the derivation of a Method 2 soil standard for sulfide. It explains why that standard was based on direct contact. Note that the derived Method 2 standard for sulfide remains unchanged from that presented in the RD/RA Work Plan (i.e., 633 parts per million [ppm]).

EPA Comment No. 3 – Figure H-2 shows the proposed locations for air monitors for the remedial work on the Group 3B floodplain properties. The proposed locations 3B-2 and 3A-3 are located relatively close together. Without knowing the predominant wind direction at the Group 3B properties (the wind direction is not specified in Appendix H to the Work Plan), it would appear that the locations of the monitors have not been selected to maximize coverage across this site and relative to the proposed work areas. Unless some of the site-specific factors listed at the bottom of page 2 of 6 preclude moving one or both of these monitors to different locations, GE shall consider moving monitor 3A-3 north so that it lies west of Parcel I7-3-8 or Parcel I7-3-9 and move monitor 3B-2 south, so that it is located in the northern area of Parcel I7-3-5. In addition, GE shall clarify whether the labeling for monitor 3B-3 (located within the Group 3A properties) and monitor 3A-3 (located within the Group 3B properties) is accurate and intentional, or whether the labels for these monitors should be switched.

GE Response – The locations of the monitors were selected by GE's air monitoring consultant (Berkshire Environmental Consultants, Inc.) to maximize coverage based first on wind direction and the location of potential receptors and second on the presence of obstructions and other influences (such as truck traffic) that could adversely affect the representativeness of the data. The predominant wind direction at the Group 3A and 3B floodplain properties is west-northwest based on five- and ten-year wind rose data from the Albany, New York National Weather Service station. Data from the GE-owned station in Pittsfield, Massachusetts also indicate a predominant west-northwest wind direction; however, data from this station also indicate that the local wind direction and speed can vary considerably. Therefore, air monitors have generally been placed at locations that will facilitate good downwind coverage (i.e. east of the construction activity) and also provide adequate coverage between the areas subject to response actions and potential receptors, regardless of wind direction. In practice, air monitors are moved as response actions progress based on the site-specific factors listed at the bottom of page 2 of 6 of Appendix H of the RD/RA Work Plan with the specific intent of providing representative data of the potential impact on receptors.

The labeling of the monitoring locations is accurate and intentional. During the implementation of response actions, GE intends to have two monitors within the area in which response actions are occurring and one monitor on the opposite side of the river to provide representative coverage for both proximal and potential downwind receptors. Therefore, monitor 3A-3 (located within Group 3B) would monitor particulates and PCBs during remedial activities on the Group 3A properties along with monitors 3A-1 and 3A-2 (located within Group 3A), and vice versa for air monitoring during the Group 3B remedial activities.

The proximity of 3B-2 to 3A-3 will not be a factor in maximizing coverage since these monitors are not anticipated to be running simultaneously. Nevertheless, as EPA has suggested, GE will adjust the location of monitor 3A-3 slightly to the north so that it is more directly east of the 3A work area, and it will adjust the location of monitor 3B-2 slightly to the south to a position southeast of the 3B work area. A copy of the revised Figure H-2 is provided in Attachment C.

EPA Comment No. 4 – The PCB evaluations presented in the Work Plan do not appear to include all of the Weston START data. GE shall review Attachment 1, which includes the missing data, and provide an explanation as to whether inclusion of these data would change the outcome of the remedial evaluations.

<u>GE Response</u> – Based on a review of the EPA PCB data included in Attachment 1 to EPA's May 26, 2005 conditional approval letter, PCBs were detected in five out of the listed 56 samples at concentrations above 2 ppm. Three of those five samples were collected at location BW-0020 on Parcel I7-2-26 in Group 3A. These samples were collected from the 0- to 0.5-foot, 1- to 1.5-foot, and 2- to 2.5-foot depth increments and showed PCB results of 36.95 ppm, 310 ppm, and 36.99 ppm, respectively. The remaining two samples were collected at location R70B000 on Parcel I7-3-6 (Front) in Group 3B. These samples

were collected from the 0- to 0.5-foot and 0.5- to 1-foot depth increments, with PCB results of 2.5 ppm and 2.2 ppm, respectively.

The PCB analytical results below 2 ppm included in EPA's attachment were not subject to further evaluation since these discrete concentrations are below the applicable Performance Standard for these properties (2 ppm) and would therefore not cause the post-remediation evaluations presented in the RD/RA Work Plan to exceed 2 ppm. The two locations where PCB analytical results exceeded 2 ppm were further evaluated as described below.

Results from location BW-0020 on Parcel 17-2-26:

As indicated in the RD/RA Work Plan, soils associated with the polygon for the 0- to 0.5-foot depth sample from location BW-0020 will be subject to removal based on the results of the GE split sample at this location. Therefore, the post-remediation spatial average PCB concentration for the 0- to 1-foot depth increment at Parcel I7-2-26 does not change based on the EPA analytical result collected at this location and depth increment.

PCB analytical results from the deeper EPA samples at location BW-0020 were subject to additional evaluations affecting the 1- to X-foot depth increment. Attachment D presents the results of the revised post-remediation evaluation (i.e., evaluation table and polygon figures) for that depth increment, modified to include the PCB analytical results collected from the 1- to 1.5-foot and 2- to 2.5-foot depth increments at sample location BW-0020. As indicated in Attachment D, the revised, post-remediation PCB spatial average concentration for the 1- to X-foot depth increment at Parcel I7-2-26 is 1.84 ppm, which is below the applicable Performance Standard of 2 ppm. Note that although the addition of these two samples did not increase the PCB spatial average above 2 ppm in this depth increment, GE has elected to remove soils associated with BW-0020 to a depth of 3 feet based on constructability and related factors, as shown on revised Technical Drawing 5 in Attachment A.

Results from location R70B000 on Parcel I7-3-6 (Front):

Rather than revise the Theissen polygons previously developed for the 0- to 1-foot depth increment for Parcel I7-3-6 (Front), GE reviewed the PCB analytical results for samples collected from the 0- to 0.5-foot and 0.5- to 1-foot depth increments at location R70B000 and determined that these results would not cause the existing PCB spatial average concentration to exceed the applicable Performance Standard (2 ppm) within this averaging area. This determination was based on the following:

- The PCB analytical results for samples collected from the 0- to 0.5-foot and 0.5- to 1-foot depth increments at location R70B000 (2.5 ppm and 2.2 ppm, respectively) are only marginally above the applicable Performance Standard.
- As indicated in the RD/RA Work Plan, the existing PCB spatial average concentration for Parcel I7-3-6 (Front) is 0.3 ppm.
- The estimated polygon areas associated with location R70B000 would be relatively small and not large enough to result in a PCB spatial average concentration greater than 2 ppm.

EPA Comment No. 5 – The top of bank boundary within the Group 3A & 3B floodplain properties does not include EPA's 2004 non-bank removals. GE shall review the top-of-bank boundary taking account of those removals, and determine whether or not additional soil removal is required to meet the Performance Standards specified in the Consent Decree.

GE Response – The top-of-bank depicted in the RD/RA Work Plan was selected by GE to be adjacent to the limits of EPA's 2004 non-bank removal areas. This was based on the assumption that the EPA removals were sufficient to address the soils within these areas. However, based on further discussions with EPA and given that EPA's removal actions did not excavate certain soils (below 2 feet in depth) containing PCBs, GE has conducted additional evaluations to ascertain whether residual PCB levels in unexcavated soils in these areas (i.e., soils beneath the limits of EPA's removals) could result in a significant change in the post-remediation spatial average PCB concentrations within an averaging area, including both the non-bank EPA removal area and the adjacent upland area evaluated by GE in the RD/RA Work Plan. The additional PCB evaluations conducted by GE (including evaluation tables and polygon figures) are provided in Attachment E.

In addition to the PCB evaluations described above, GE evaluated whether any non-PCB data within the non-bank EPA removal areas could cause the need for non-PCB response actions within the adjacent averaging areas. The results of the non-PCB evaluation are provided in Attachment E.

Based on the information provided in Attachment E, GE will remove additional soils at Parcel I7-2-35 (Back). Specifically, GE will remove soils associated with sample location R47CZ279 to a depth of 3 feet and soils associated with sample location R47EZ244 to a depth of 2 feet.

Please call Dick Gates if you have any questions about this Addendum.

Silfer/Acc

Sincerely,

Andrew T. Silfer, P.E. **GE Project Coordinator**

Enclosures

V \GE_Housatonic_Mile_and_Half\Reports and Presentations\Addendum Group 3A and 3B\35552196 doc

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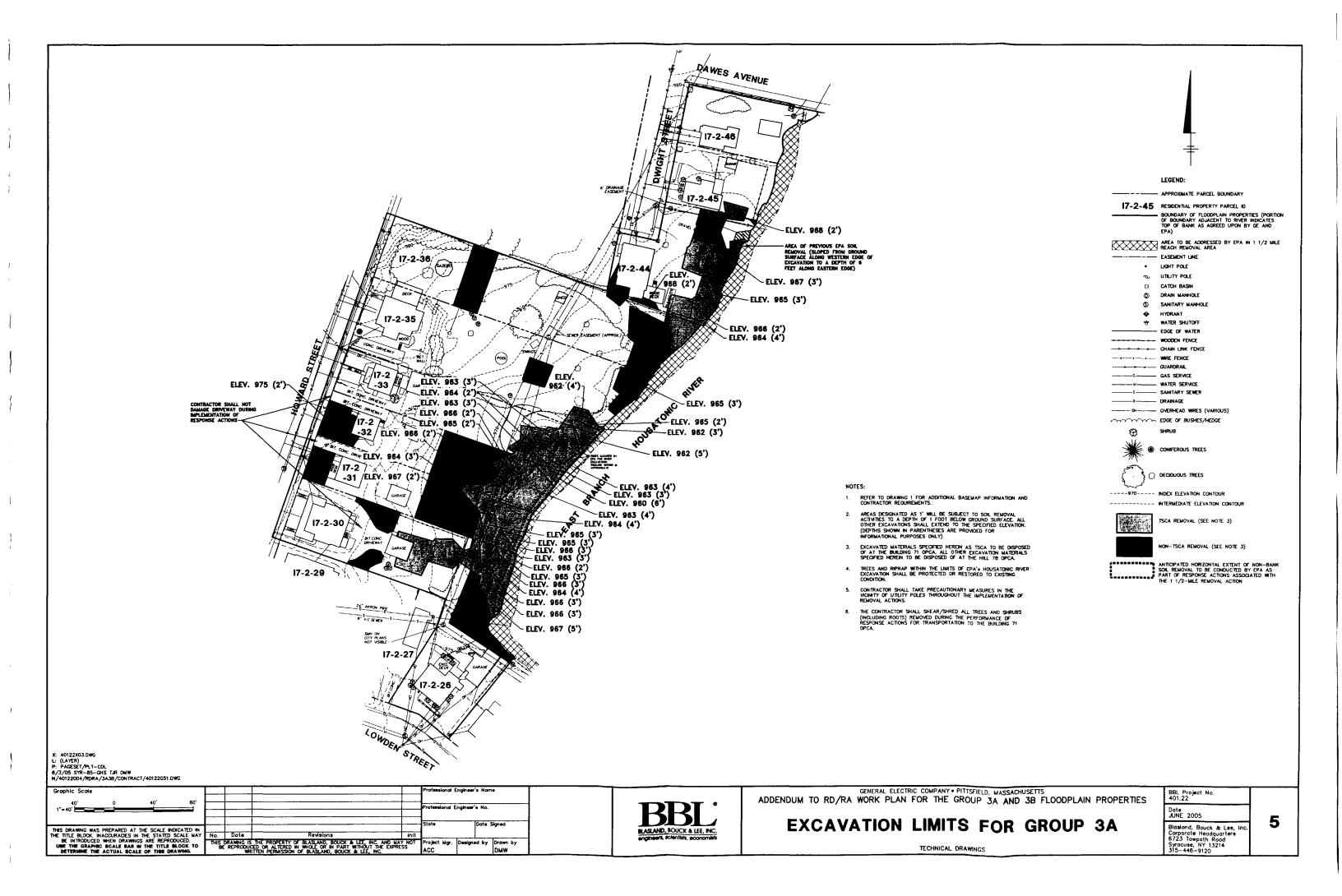
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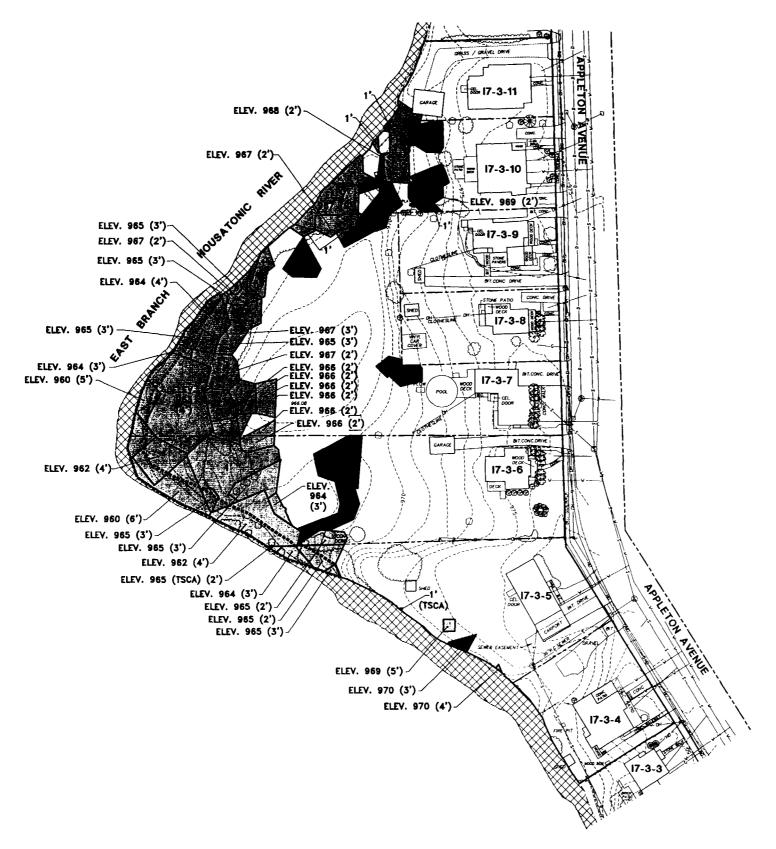
GE Internal Repository

Attachment A

Revised Technical Drawings 5 and 6







- REFER TO DRAWING 1 FOR ADDITIONAL BASEMAP INFORMATION AND CONTRACTOR REQUIREMENTS.
- AREAS DESIGNATED AS 1' WILL BE SUBJECT TO SOIL REMOVAL ACTIVITIES TO A DEPTH OF 1 FOOT BELOW GROUND SURFACE, ALL DITHER EXCAVATIONS SHALL EXTEND TO THE SPECIFIED ELEVATION. (DEPTHS SHOWN IN PARENTHESES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY).
- EXCAVATED MATERIALS SPECIFIED HEREIN AS TSCA TO BE DISPOSED OF AT THE BUILDING 71 OPCA. ALL OTHER EXCAVATION MATERIALS SPECIFIED HEREIN TO BE DISPOSED OF AT THE HILL 78 OPCA.

- THE CONTRACTOR SHALL SHEAR/SHRED ALL TREES AND SHRUBS (INCLUDING ROOTS) REMOVED DURING THE PERFORMANCE OF RESPONSE ACTIONS FOR TRANSPORTATION TO THE BUILDING 71 OPCA.

LEGEND:

- APPROXIMATE PARCEL BOUNDARY

17-3-9 RESIDENTIAL PROPERTY PARCEL ID

BOUNDARY OF FLOODPLAIN PROPERTIES (PORTION OF BOUNDARY ADJACENT TO RIVER INDICATES TOP OF BANK AS AGREED UPON BY GE AND EPA)

AREA TO BE ADDRESSED BY EPA IN 1 1/2 MILE REACH REMOVAL AREA

----- EASEMENT LINE

UGHT POLE

UTILITY POLE

WATER SHUTOFF

---- FDCF OF WATER

WOODEN FENCE

CHAIN UNK FENCE

----- WIRE FENCE

WATER SERVICE SANITARY SEWER

- OH- OVERHEAD WIRES (VARIOUS) EDGE OF BUSHES/HEDGE

SHRUB

CONIFEROUS TREES

\$

DECIDUOUS TREES

----970 ---- INDEX ELEVATION CONTOUR INTERMEDIATE ELEVATION CONTOUR

TSCA OR RCRA REMOVAL (SEE NOTE 3)



NON-TSCA/NON-RCRA REMOVAL (SEE NOTE 3)

X: 40122X03.DWG L: (LAYER) P: PAGESET/PLT-CDL 67/705 SYR-85-CH5 DMW N/40122004/RDRA/3A38/CONTRACT/40122G52.DWG

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN HE TITLE BLOCK, INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. USE THE GRAPING SCALE BAR IN THE TITLE BLOCK TO DETERBING THE ACTUAL SCALE OF THIS DRAWING. NO. LOUSE
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GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES

EXCAVATION LIMITS FOR GROUP 3B

TECHNICAL DRAWINGS

BBL Project No. 401.22 Date JUNE 2005

Blasiand, Bouck & Lee, Inc Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120

6

Attachment B

Derivation of Method 2 Soil Standard for Sulfide (Carbon Disulfide)



ATTACHMENT B

GENERAL ELECTRIC COMPANY PITTSFIELD, MASSACHUSETTS

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES

SUPPLEMENTAL INFORMATION ON DERIVATION OF METHOD 2 SOIL STANDARD FOR SULFIDE (CARBON DISULFIDE)

Appendix E to the RD/RA Work Plan included the derivation of a Massachusetts Contingency Plan (MCP) Method 2 S-1 soil standard for sulfide. The derivation was conducted in accordance with the methods outlined in 310 CMR 40.0984 of the MCP. Due to the absence of established toxicity values for sulfide, the Method 2 S-1 soil standard was derived using available toxicity data for carbon disulfide. Carbon disulfide has been previously approved by EPA as a "surrogate" for sulfide during the performance of the initial screening steps in evaluations of non-PCB constituents (i.e., the comparison of maximum detected concentrations to the EPA Region IX PRGs or EPA-approved "surrogates"). Comment No. 2 of the May 26, 2005 letter from EPA to GE conditionally approving the RD/RA Work Plan stated that the derivation of this soil standard did not appear to have taken into account odor threshold or leaching potential to groundwater, and that GE should provide an explanation as to why only direct contact was taken into consideration during the derivation process. This attachment provides such information.

As described in Appendix E to the RD/RA Work Plan, the derived Method 2 S-1 soil standard for sulfide of 633 mg/kg was based on direct contact exposure to soil. Due to the absence of toxicity values for sulfide, this derivation utilized EPA's oral reference dose for non-cancer effects of carbon disulfide (as a surrogate for sulfide). (Potential cancer effects were not evaluated, since this chemical is not a carcinogen.)

A leaching-based concentration for sulfide is not applicable. First, carbon disulfide is a flammable liquid, and in this state it is likely to have a high leaching potential and therefore may not be representative of the leaching potential of sulfide found in soil. Secondly, the equations presented in Section 5.2 of the Massachusetts Department of Environmental Protection's (MDEP's) 1994 document titled *Background Document for the Development of MCP Numerical Standards* for deriving a leaching-based concentration require a Henry's Law Constant and a target groundwater concentration. There is no established Henry's Law Constant for sulfide, although one is available for carbon disulfide. However, a target groundwater concentration for GW-2 and/or GW-3 groundwater is not available. (Groundwater at the site is classified as GW-2 [for potential volatilization to indoor air] if it is near an occupied building, and as GW-3 [based on discharge to surface water].) More specifically, with regard to protection of GW-3 groundwater, there are no ambient water quality criteria for sulfide or carbon disulfide. For GW-2 groundwater, sulfide is not volatile, and therefore should not pose a concern to indoor air.

With respect to odor, given the absence of a specific Odor Index for sulfide, the MCP's default ceiling concentration of 1,000 mg/kg was used, consistent with Section 40.0984(9)(a) of the MCP. Sulfide itself is odorless, and MCP guidance allows for use of a default ceiling limit for those chemicals that do not have enough information available to derive an Odor index. Although an Odor Index for carbon disulfide can be derived, it was not considered relevant for this derivation. As indicated above, carbon disulfide is a flammable liquid and depending on its physical state (pure or technical grade) has a pleasant- or foul-smelling odor. This industrial solvent (and its corresponding odor index) is not likely to be representative of sulfide soil concentrations. Since the applicable ceiling concentration of 1000 mg/kg for sulfide of exceeds the derived concentration of 633 mg/kg based on direct contact, there is no need to adjust the latter (see 310 CMR 40.0984(9)).

Finally, the practical quantitation limit (PQL) for sulfide is 200 mg/kg and that for carbon disulfide is 0.01 mg/kg to 1.0 mg/kg (as reported in GE's Field Sampling Plan/Quality Assurance Project Plan). These PQLs are lower than the derived standard, and thus the standard does not need to be revised to the level of the PQL.

In summary, a Method 2 S-1 standard of 633 mg/kg has been derived for sulfide consistent with the MCP and MDEP guidance. This value is based on direct contact exposure as there are insufficient data to derive a leaching-based value and the default MCP ceiling concentration of 1,000 mg/kg for odor is greater than 633 mg/kg.

Attachment C

Revised Figure H-2 (Air Monitoring Locations for Group 3B)





X: 40122X03.DWG L: ON=", OFF=REF" P: PAGESET/PLT-DL2B (PORTRAIT) 6/7/05 SYR-B5-GHS LAF DMW N/40122004/RDRA/3A3B/CONTRACT/40122G53.DWG

GROUP 3B
REVISED AMBIENT AIR PCB AND
PARTICULATE MONITORING LOCATIONS



FIGURE H-2

Attachment D

Revised Post-Remediation Conditions for I7-2-26 (1- to X-foot depth increment)



TABLE D-1 POST-REMEDIATION CONDITIONS PARCEL 17-2-26: 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

1- TO 2-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	#SINGT CALL (O) #1	eBample Depth (ft.)	PCB (Conc. (ppm)	Volume (cumulative)	GAVerage PCB S Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-20	890	315	1 - 2	0 101	11.67	0 10	1 18
3A-SB-23	896	452	1 - 2	0.85	16 75	0.85	14 24
3A-SB-23	896A	123	1 - 2	0.021	4 56	0 02	C 10
3A-SB-24	895	147	1 - 2	26	5 45	2 60	14 17
3A-SB-24	895A	141	1 - 2	0.021	5 23	0.02	0 11
3A-SB-28	906	381	1 - 2	2.6	14 11	2 60	36 68
3A-SB-34	956	29	1 - 2	0 092	1 06	0.09	0 10
BW-0020	25	300	1 - 15	0.021	11.10	0.02	0 23
BW-0020	25A	91	1 - 15	310	3 37	310 00	1,043 55
BW-0021	911, 911B	98	1 - 1.5	0.021	3 62	0 02	0.08
BW-0021	911A	304	1 - 15	231	11 25	2 31	25 99
BW-0022	910	62	1 - 1.5	0.021	2 31	0.02	0.05
BW-0023	909	92	1 - 15	1.01	3 39	1 01	3 43
BW-0023	909A	261	1 - 15	0.021	9 67	0.02	0 20
			1 - 15	0.25			
R49A000	1123	204	15 - 2	0.3	7 55	0 28	2 08
R49A025	858	474	1 - 15	0.5	17 56	0.40	7 02
R49A050	859	397	1 - 1.5	0.3	14 71	0 30	4 41
R49A075	861	576	1 - 15	0.3	21 33	0.33	6 93
R49A100	862	463	15 - 2	0.35	17 15	0 25	4 29
R49A100	862A	44	1.5 - 2	0.25 0.021	1 62	0 02	0 03
R49A114	865	234	15 - 2	0.021	8 66	0.28	2 38
R49A114	865A	553	15 - 2	0.25 0.021	20 49	C G2	0 43
R49B000		85	15 - 2	0.021		0.28	0 87
	1136		1.5 - 2	0.25 0.25	3 16		
R49B025	860	637	15 - 2	0,25	23 58	0 25	5 90
R498075	863	747	15 - 2	0.235 0.021	27 67	0 27	7 40
R49B100	866	117	1.5 - 2	0.021	4 32	0 02	0 09
R49B100	866A	241	1 - 1.5	0.3	8 92	0 30	2 68
R49B115	867	251	1 - 1.5	0.021	9.28	0 02	0 19
R49BZ128	1133	197	1 - 15	0.021	7 31	0 02	0 15
R49BZ141	868	87	1 - 1.5	0.021	3 22	0.02	0.07
R49C115	1029	157	1 - 15	0.021	5 81	0 02	0 12
R49C115	1029A	66	1 - 15	0.7	2 44	0.85	2.07
R50A000	1135	121	1 - 15	0.3	4,47	0 28	1 23
R50A025	864	506	1 - 1.5	0.25	18 74	0 25	4 68
R50A050	1034	591	1 - 15	0.3	21 88	0 30	6 56
R50A075	1025	325	1 - 15	0.175	12 05	C.24	2 86
R50AZ109	1134	47	1 - 1.5	03	1 72	0 30	0.52
R50AZ109	1134A	35	1 - 15	0.021	1 30	0.02	0.03
R76C175	949	20	1 - 1.5	1.25	0.73	1 13	0.82
R76C186	950	56	1 - 15	10 2.1	2.06	6 05	12 45
R76CZ202	882	392	1 - 1.5	0.021	14 53	0 02	0 31
R76CZ202	952	77	1 - 1.5	0.021	2.85	0 02	0.06
R76CZ232	885	244	1 - 1.5	0.021	9.03	0.02	0.19
.11002252					397 64	V.U2	1,216.93
Totals:		10,736	1				

TABLE D-1 POST-REMEDIATION CONDITIONS PARCEL I7-2-26: 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

2- TO 3-FOOT DEPTH INCREMENT

Sample Bold	Polygon iD		Sample Depth (IL)	B Con Cop Cop Cop	Volume (cumulative) (cy)	Average PCB Concentration Per Pool	Average PCB Conc. TMES Total Volume
3A-SB-20	357	193	2 - 3	0.021	7 16	0.02	0 15
3A-\$B-21	415	32	2 - 3	4.9	1 17	4.90	5 73
3A-SB-22	363	153	2 - 3	43	5 67	43 OC	244 02
3A-SB-22	363A	86	2 - 3	0.021	3 18	0.02	0 07
3A-SB-23	362	398	2 - 3	0.6	14 75	0.60	8 85
3A-SB-23	362A	110	2 - 3	0.021	4.06	0.02	0.09
3A-SB-24	361	342	2 - 3	0.021	12 68	0.02	0 27
3A-SB-24	361A	4,374	2 - 3	0.038	162 01	0.04	6 16
3A-SB-27	378	78	2 - 3	10.5	2 89	10.50	30 33
3A-SB-27	378A	247	2 - 3	0.021	9.14	0.02	0 19
3A-SB-28	379	404	2 - 3	3.5	14 95	3 50	52 33
3A-SB-34	422	4	2 - 3	0 44	0.16	0 44	0.07
3A-SB-35	388	447	2 - 3	0.021	16 54	0 02	0 35
3A-SB-35	388A	1,334	2 - 3	0 28	49.39	0 28	13 83
BW-0020	10A	270	2 - 25	0.021	9 99	0 02	0 21
BW-0020	10	88	2 - 25	36 99	3 28	36 99	121 15
BW-0021	383, 383B	36	2 - 25	0.021	1 34	0 02	0 03
BW-0021	383A	259	2 - 25	0 63	9 58	0 63	6 04
BW-0022	11	62	2 - 25	0.021	2 31	0 02	0.05
BW-0023	381	232	2 - 25	0.021	8.58	0 02	0.18
BW-0023	381A	92	2 - 25	03	3 39	0 30	1 32
R49BZ128	503	521	2 - 25	0.021	19 29	0 02	C.41
R49BZ141	346	87	2 - 25	0.021	3 22	0 02	C 07
R49CZ120	455	104	2 - 2.5	0.021	3 86	0 02	0.08
R49CZ120	455A	5	2 - 2.5	0.6	0 18	0 60	C 11
R50AZ109	457	226	2 - 25	02	8 38	0 20	1 68
R50AZ109	457A	58	2 - 25	0.021	2 16	0 02	0.05
R76CZ202	348	385	2 - 2.5	34	14 27	34 00	485.09
R76CZ202	348A	27	2 - 2.5	0.021	0 99	0 02	0 02
R76CZ217	417	73	2 - 2.5	60	2 72	60.00	163 29
R76CZ232	352	10	2 - 2.5	0.021	0 37	0.02	0 01
Totals:		10,736			397 65		1,141.88
					Volume Weig	hted Average:	2.87

3- TO 4-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-20	208	500	3 - 4	0.021	18 53	0 02	0 39
3A-SB-20	208A	66	3 - 4	14 55	2 45	14 55	35 64
3A-SB-21	254	32	3 - 4	49	1 17	4 90	5 73
3A-SB-22	214	374	3 - 4	43	13 87	43 00	596 25
3A-SB-23	213	525	3 - 4	0.6	19 44	0 60	11 67
3A-SB-23	213A	291	3 - 4	0.021	10 78	0 02	0 23
3A-SB-24	212	630	3 - 4	0.021	23 32	0 02	C 49
3A-SB-24	212A	4,398	3 - 4	0.038	162 88	0.04	6 19
3A-SB-27	229	426	3 - 4	10.5	15 76	10 50	165.50
3A-SB-27	229A	316	3 - 4	0.021	11 69	0 02	0.25
3A-SB-28	230	667	3 - 4	3.5	24 70	3 50	86 45
3A-SB-34	259	4	3 - 4	0.44	0 16	0 44	0.07
3A-SB-35	237	517	3 - 4	0.021	19 15	0 02	0.40
3A-SB-35	237A	1,334	3 - 4	0.28	49 39	0.28	13 83
BS000305	334	353	3 - 4	0.021	13 08	0 02	0.27
B\$000307	293	206	3 - 4	0.11	7 65	0 11	0.84
B\$000307	293A	97	3 - 4	0.021	3 59	0.02	0.08
Totals:		10,736			397 62		924 27
		•	·	Volume Weigi	rted Average:	2,32	

TABLE D-1 POST-REMEDIATION CONDITIONS PARCEL 17-2-26: 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

4- TO 5-FOOT DEPTH INCREMENT

Sample ID(s)	P Polygon B)	Polygoli Aria (G) (1)	0.			# PCB T Conc.	Yolume (cumulative)	Average IncB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-20	221	681	4	-	5	0.021	25 22	0 02	0 53
3A-SB-20	221A	275	4		5	0.069	10 19	0 07	0 70
3A-SB-21	265	383	4	-	5	0.02	14 17	0 02	0.28
3A-SB-22	228	450	4	-	5	0.88	16 67	0.88	14 67
3A-SB-23	227	375	4	-	5	0.021	13 90	0 02	0 29
3A-SB-23	227A	889	4		5	0.02	32 93	0 02	0 66
3A-SB-24	226	630	4	-	5	0.021	23 32	0 02	0 49
3A-SB-24	226A	4,398	4	-	5	0.021	162 88	0 02	3.42
3A-SB-34	268	4	4	-	5	0 055	0 16	0.06	0.01
3A-SB-35	249	533	4	-	5	0.021	19 75	0 02	0.41
3A-SB-35	249A	1,334	4	-	5	0.019	49 39	0 02	0 94
BS000130	352	35	4	-	4.5	0.021	1 28	0 02	0 03
B\$000305	351	446	4		5	16	16 50	16 00	264 08
BS000307	306	206	4		5	0 18	7 65	0 18	1 38
BS000307	306A	97	4	-	5	0.021	3 59	0 02	0.08
Totals:		10,736		~~			397 62		287 97
							Volume Weig	hted Average:	0.72

5- TO 6-FOOT DEPTH INCREMENT

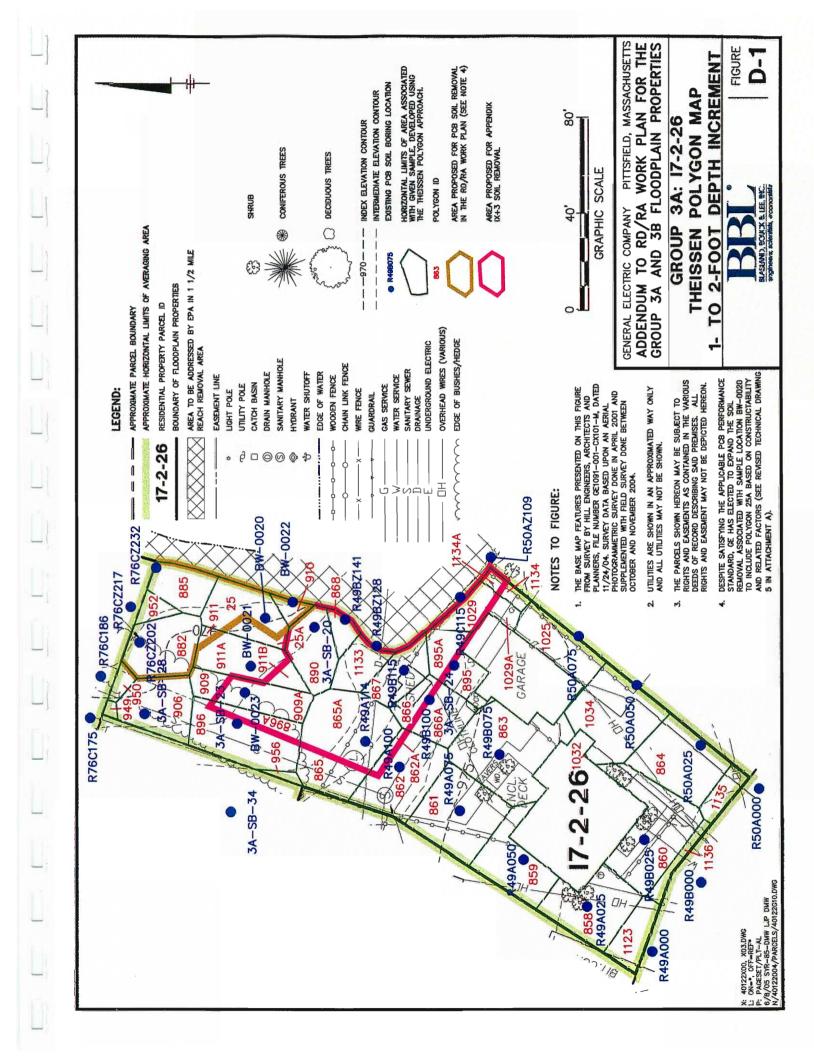
Sample ID(s)	Polygon ID	Polygon Area (sq. fl.)	Sample Depth (f	PC Cor (pp	c. Aoinme (criminative	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-20	213	956	5 -	6 00	9 35.41	0 07	2 44
3A-SB-21	258	383	5	6 00	2 14.17	0.02	0 28
3A-SB-22	218	450	5 -	6 08	8 16.67	0.88	14 67
3A-SB-23	217	1,264	5 -	6 0.0	2 46 83	0.02	0 94
3A-SB-24	216	5,029	5 -	6 0.0	1 186 25	0 02	3.91
3A-SB-34	261	4	5 -	6 0.0	5 0.16	0.06	0.01
3A-SB-35	239	1,867	5 -	6 0.0	9 69.14	0 02	1 31
BS000130	338	35	5 -	5.5 32	2 1.28	32 20	41 24
BS000305	337	446	5 -	6 1.	16.50	1 50	24 76
BS000307	296	303	5 -	6 0.3	5 11 24	0.36	3 99
Totals:		10,737			397 67		93 56
					Volume We	lighted Average:	0.24

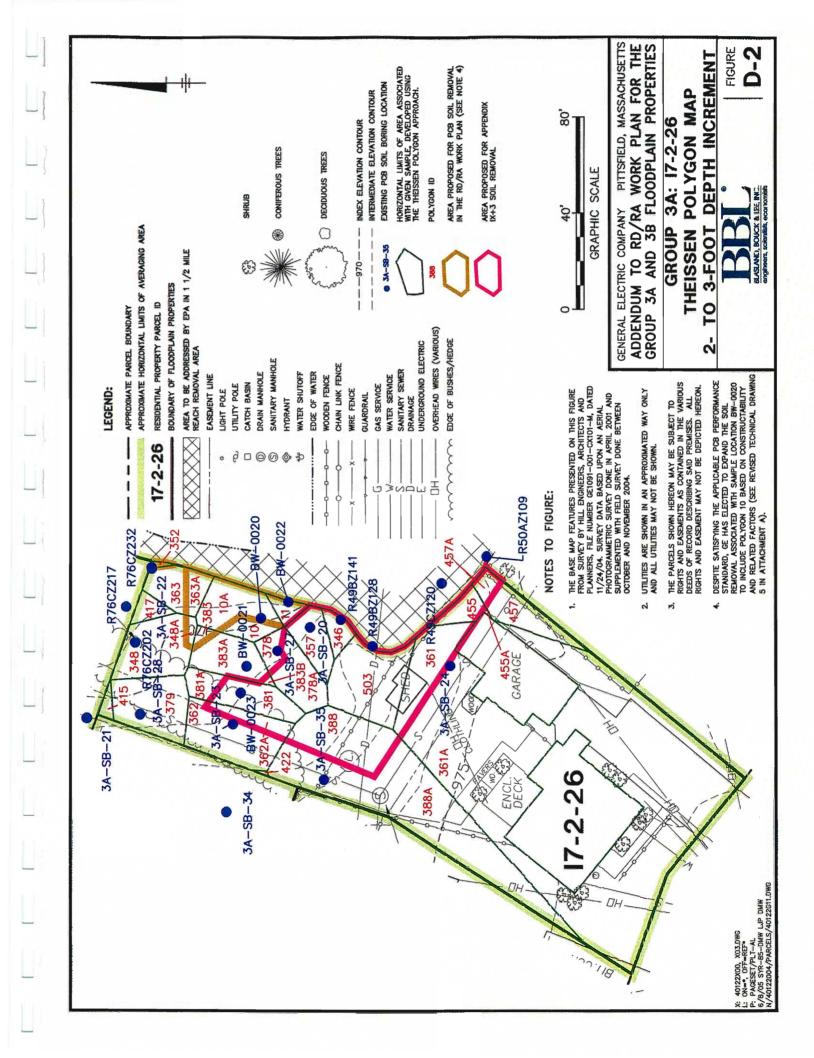
SUMMARY - 1- TO X-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polypon Area (eq. ft.)	Sample Depth (ft.)	PCB Conc (ppm)	Volume (cumulative)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
Totals:		10,736			1,988 20		3,664.60
					Volume Weig	hted Average:	1.84

Notes

- Non-detectable PCBs included as one-half the detection limit in calculations and shown in bold
- 2. For instances where a duplicate sample was available, the average of the samples was included in table.
- 3 All calculations and rounding are performed by the computer software. Therefore, certain quantities in above table are displayed as rounded numbers for table clarity.
- 4 Shaded numbers in bold and italics represent the placement of clean backfill material following the performance of the proposed remediation. The backfill concentration corresponds to the average PCB concentration as presented in the CD Sites Backfill Data Set.





Attachment E

Evaluation of Need for Additional Response Actions Within the 2004 Non-Bank EPA Removal Limits



ATTACHMENT E

GENERAL ELECTRIC COMPANY PITTSFIELD, MASSACHUSETTS

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES

EVALUATION OF DATA WITHIN THE VICINITY OF NON-BANK EPA REMOVAL AREA

Comment No. 5 of the May 26, 2005 letter from EPA to GE conditionally approving the RD/RA Work Plan directed GE to review the top-of-bank boundary taking account of the EPA's 2004 non-bank removals, and to determine whether additional soil removal is required to meet the applicable Performance Standards specified in the Consent Decree. The top-of-bank depicted in the RD/RA Work Plan was selected by GE to correspond to the limits of EPA's 2004 non-bank removal areas. This was based on the assumption that the EPA removals were sufficient to address the soils within that area. However, because EPA's removal actions did not excavate all soils containing PCBs, but rather left in place certain soils at depths below 2 feet, it was necessary to ascertain whether residual PCB levels in unexcavated soils from these areas (i.e., soils beneath the limits of EPA's removal) could result in an increase in the post-remediation PCB spatial average concentration for the combined averaging area represented by the non-bank EPA removal area and the adjacent upland area evaluated by GE in the RD/RA Work Plan. In addition, evaluations of the non-PCB data within the non-bank EPA removal areas were necessary to determine whether any such data could cause the need for additional non-PCB response actions.

In response to EPA's comment, GE conducted additional PCB and non-PCB evaluations for averaging areas I7-2-35 (Back), I7-2-36 (Back), I7-2-44, and I7-2-45 within the Group 3A floodplain properties and averaging areas I7-3-7 (Back), I7-3-10, and I7-3-11 within the Group 3B floodplain properties. These areas are located adjacent to the EPA's 2004 non-bank removal areas. The results of these evaluations are provided below.

I. PCB Evaluations

The first step in the PCB evaluation process for the above-listed averaging areas was a screening-level comparison to determine the maximum allowable PCB concentration that could be present within the unexcavated soils in the EPA non-bank removal areas without causing an exceedance of the 2 ppm PCB Performance Standard in the combined averaging area represented by the non-bank EPA removal area and the adjacent upland area evaluated by GE in the RD/RA Work Plan. Since the minimum depth of non-bank soil removal performed by EPA was 2 feet below ground surface, only those soils within the 1- to X-foot depth increment were evaluated for each area.

Maximum allowable PCB concentrations for the unexcavated soils in the EPA non-bank removal areas were calculated for each of the above-listed averaging areas utilizing the following equation:

$$V_T(2ppm) = V_{RD/RA}(PCB_{RD/RA}) + V_{EPA}(PCB_{BACKFILL}) + V_{REMAIN}(PCB_{MAX,ALLOWABLE})$$

Where:

V_T = Total soil volume in the 1-X foot depth increment subject to evaluation (including the area evaluated

by GE in the RD/RA Work Plan plus the EPA non-bank removal area).

2 ppm = PCB Performance Standard for residential properties.

 $V_{RD/RA}$ = Volume of soil within the averaging area specified in the RD/RA Work Plan.

PCB_{RD/RA} = Post-remediation PCB spatial average concentration specified in the RD/RA Work Plan.

V_{FPA} = Volume of non-bank soil removed by EPA adjacent to the averaging area.

 $PCB_{BACKFILL} = PCB$ Backfill concentration as presented in the Backfill Data Set.

 V_{REMAIN} = Volume of soil within the EPA non-bank removal area not otherwise removed by EPA.

This equation was solved to calculate $PCB_{MAX. ALLOWABLE}$, the maximum allowable PCB concentration (as defined above).

The maximum allowable PCB concentrations calculated for the unexcavated soil in the EPA non-bank removal areas are presented in Table E-1. These maximum allowable concentrations were then compared to the existing PCB data from the unexcavated soils located in the vicinity of the EPA non-bank removal areas. These comparisons are shown in Table E-2. In instances where the existing maximum PCB concentration in unexcavated soils in the vicinity of the EPA non-bank removal areas was below the maximum allowable PCB concentration, it was concluded that no additional removal was required and that the applicable Performance Standard would be satisfied by the remediation activities proposed in the RD/RA Work Plan.

As indicated in Table E-2, the screening evaluation described above identified two areas that required further assessment – namely, the areas around sample location R47CZ279 in averaging area I7-2-35 (Back) and around sample location RB21565 on Parcel I7-3-10. For those areas, GE revised the detailed PCB evaluations presented in the RD/RA Work Plan to include the EPA non-bank removal areas at Parcels I7-2-35 (Back) and I7-3-10. For this combined averaging area, GE developed PCB polygons for the non-bank EPA removal areas and incorporated these polygons into the post-remediation PCB evaluations presented in the RD/RA Work Plan. These revised polygons are presented in Figures E-1 through E-9, and the revised PCB evaluations for the 1- to X-foot depth increment are presented in Tables E-3 and E-4. The results of these evaluations indicated that the anticipated post-remediation spatial average PCB concentration at Parcel I7-3-10 remained below the 2 ppm Performance Standard (see Table E-3). However, the post-remediation spatial average PCB concentration for averaging area I7-2-35 (Back) increased to above 2 ppm (see Table E-4). The increase in the I7-2-35 (Back) spatial average is predominantly due to the polygon within the EPA non-bank removal area associated with sample R47CZ279 (2- to 3-foot depth increment; 361 ppm). Accordingly, GE will remove soils associated with that polygon. In addition, GE has elected to remove soils associated with polygon 758A in the vicinity of sample location R47EZ244 (1- to 2-foot depth increment) in the same averaging area based on constructability and related factors. This removal will reduce the spatial average PCB concentration in this averaging area to 1.91 ppm, as shown in Table E-5.

II. Evaluation of Non-PCB Constituents

In addition to PCB evaluations described above, GE also evaluated whether any non-PCB data within the non-bank EPA removal areas could cause the need for non-PCB response actions within adjacent averaging areas. The first step in this process was to identify if non-PCB samples were collected within the EPA non-bank removal areas. Based on this review, GE identified one non-PCB sample collected at location RB021541. The sample was collected from the 0- to 0.5-foot depth increment at Parcel I7-2-44. The non-PCB data from this sample are provided in Table 6. Soils present within the sampling increment at this location were subject to removal actions during EPA's non-bank removal activities; however, GE conservatively evaluated this data in the event that the non-PCB data may cause the need for non-PCB response actions within the adjacent portions of Parcel I7-2-44. The second step in the evaluation process involved comparing the analytical results for this sample to the MCP Method 1, Wave 2 soil standards to determine if a more detailed evaluation (i.e., inclusion of the "new" sample result into the non-PCB evaluations conducted for Parcel I7-2-44) was necessary. Since no constituent concentrations in this sample exceeded the Method 1, Wave 2 soil standards, no further evaluations were necessary.

III. Summary

Based on the information provided above, GE will remove additional soils within the non-bank EPA removal area at Parcel I7-2-35 (Back). Specifically, GE will remove soils within that area that are associated with sample R47CZ279 to a depth of 3 feet, and will remove soils associated with polygon 758A in the vicinity of sample location R47EZ244 to a depth of 2 feet.

TABLE E-1 CALCULATION OF MAXIMUM ALLOWABLE PCB CONCENTRATIONS

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

a di Barti II.						GE/EI	PA "Slice"		
		Proposed GE E	valuation Area 1	Non-	Bank EPA Soil R	temoval Volume 2	EPA S	Soil Volume ³	
Averaging .	and the state of t	Soll Volume	Spatial Average (ppm)	Removal Depth (ft)	Soil Removal Volume (cy)	Backfill Concentration (ppm)	Remaining Non-Bank Soil Volume (cy)	Maximum Allowable PCB Concentration in Remaining Soils Located Within the EPA Non-Bank Removal Areas (ppm) 4	Total Soil Volume (cy)
Group 3A		.							
17-2-35 (Back)	6	2,764.20	1.81	2	5.38	0.021	21.51	26.91	2,791.09
17-2-36 (Back)	6	2,739.75	1.24	2	27.71	0.021	21.03	103.62	2,788.49
17-2-44	4	1,098.32	1.94	2-6	40.95	0.021	8.50	19.28	1,147.78
17-2-45	6	952.29	0.47	2-3	3.47	0.021	5.91	249.54	961.67
Group 3B		• • • • • • • • • • • • • • • • • • •						· · · · · · · · · · · · · · · · · · ·	
17-3-7 (Back)	6	5,903.96	1.82	2-3	13.70	0.021	29.70	38.69	5,947.36
17-3-10	5	1,695.34	1.87	2-4	19.01	0.021	21.30	14.11	1,735.66
17-3-11	6	1,035.87	0.80	2	1.32	0.021	5.27	238.45	1,042.46

Notes:

$$V_T(2ppm) = V_{GE}(PCB_{GE}) + V_{BACKFILL}(PCB_{BACKFILL}) + V_{REMAIN}(PCB_{REMAIN})$$

Given:

2 ppm = PCB Performance Standard for residential properties

V_T = Total soil volume subject to evaluation (Includes both areas evaluated by GE in the RD/RA Work Plan and EPA non-bank removals)

V_{GE} = Volume of soil within the averaging area specified in the RD/RA Work Plan

PCB_{GF} = Post-remediation PCB spatial average concentration specified in the RD/RA Work Plan

V_{BACKFILL} = Volume of non-bank soil removed by EPA adjacent to the averaging area

PCB_{BACKFILL} = PCB Backfill concentration as presented in the Backfill Data Set

V_{REMAIN} = Volume of non-bank soil remaining adjacent to averaging area

Calculated:

PCB_{MAX ALLOWABLE} = Maximum allowable PCB concentration

¹ The soil volumes and spatial average PCB concentrations were presented in the RD/RA Work Plan for the Group 3A and 3B Floodplain Properties (BBL; 2005).

² The soil volumes shown are within the non-bank EPA removal area. The backfill concentration (0.021 ppm) represents backfill concentrations as presented in the CD Sites Backfill Data Set.

³ The soil volumes shown are within the non-bank EPA removal area but have not been removed by EPA. The spatial average concentration represents the maximum allowable PCB concentration for this area to achieve the residential Performance Standard of 2 ppm.

⁴ The maximum allowable PCB concentration was derived based on the following calculation:

TABLE E-2

COMPARISON OF MAXIMUM ALLOWABLE PCB CONCENTRATIONS TO EXISTING PCB DATA IN THE VICINITY OF NON-BANK EPA REMOVAL AREAS

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Averaging Area	Sample Location		Maximum PCB Concentration Observed in the Vicinity of Remaining Solls Located Within the EPA Non-Bank Removal Areas (ppm)	Maximum Allowable PCB Concentration in Remaining Solls Located Within the EPA Non-Bank Removal Areas (ppm)
Group 3A				
17-2-35 (Back)	R47CZ279	2-2.5	350 [372]	26.91
17-2-36 (Back)	R47BZ301	2-2.5	48	103.62
17-2-44	R45CZ108.5	2-2.5	12	19.28
17-2-45	R45CZ103.5	2-2.5	41	249.54
Group 3B				
17-3-7 (Back)	R77FZ261	2-2.5	19	38.69
17-3-10	RB21565	2-2.5	18	14.11
17-3-11	R58AZ142	2-2.5	27 J	238.45

Notes:

- 1. See Table E-1 for calculation of maximum allowable PCB concentration.
- 2. Shaded values represent an exceedance of the maximum allowable PCB concentration; thus, requiring further evaluation as described in this attachment.
- 3. J = estimated value.
- 4. Field duplicate sample result presented in brackets.

TABLE E-3 POST-REMEDIATION CONDITIONS PARCEL 17-3-10: 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

1- TO 2-FOOT DEPTH INCREMENT

ringer bel i		es (Casa)		(00m)	Volume (cumulative)	reducing the second sec	Average PCB Cong TIMES rotal Volume
3B-SB-2	156	268	1 - 2	2.01	9.92	2.01	19.94
3B-SB-2	156A	1	1 - 2	0.021	0.03	0.02	0 00
3B-\$B-3	161	345	1 - 2	0.055	12.76	0.06	0 70
R58A025	165	581	1 - 1.5 1.5 - 2	0.25 0.25	21.50	0.25	5.38
R58A050	167	159	1 - 1.5 1.5 - 2	0.25 0.25	5.87	0.25	1.47
R58A075	169	151	1 - 1.5 1.5 - 2	0.25 0.25	5.58	0.25	1.40
R58AZ125	171	69	1 - 1.5	1.9	2.54	1.90	4.83
R58AZ134	173A,173B	11	1 - 1.5	0.021	0.41	0.02	0.01
R58AZ134	173	50	1 - 1.5	2.1	1.84	2.10	3.87
R82C025	176	438	1 - 1.5 1.5 - 2	0.25 0.2	16.21	0.23	3.65
R82C050	178	55	1 - 1.5 1.5 - 2	0.25 0.25	2.02	0 25	0.51
R82C075	180	70	1 - 1.5 1.5 - 2	0.25	2.59	0.28	0.71
R82C100	182	142	1 - 1.5 1.5 - 2	0.65	5.26	0.53	2 76
R82C125	184	112	1 - 1.5 1.5 - 2	0.30	4.16	0.30	1.25
R82C130	185	27	1 - 1.5 1.5 - 2	0.41	1.00	0.31	0.30
R95A050	127	382	1 - 1.5 1.5 - 2	0.25 0.25	14.15	0.25	3.54
R95A075	187	612	1 - 1.5 1.5 - 2	0.3 0.25	22.65	0 28	6.23
R95A100	189	544	1 - 1.5 1.5 - 2	0.021 0.021	20.16	0.02	0.42
R95A125	191	532	1 - 1.5 1.5 - 2	8.1 1.5	19.70	4.80	94.55
R95A133	193	448	1 - 1.5 1.5 - 2	1.7 0.30	16.60	1.00	16.60
R95AZ156	195	387	1 - 1.5	0.021	14.34	0.02	0.30
R95AZ179	197,197A	464	1 - 1.5	0.021	17.20	0.02	0.36
R95AZ202	199,199A	87	1 - 1.5	0.021	3.23	0.02	0.07
R95B000	128	1,064	1 - 1.5 1.5 - 2	0.25 0.25	39.39	0.25	9.85
R95B075	129	465	1 - 1.5	0.25	17.22	0.28	4.74
R95B100	130	666	1 - 1.5	2.1	24.66	1.50	36.99
R95B125	131	514	1 - 1.5 1.5 - 2	0.021	19.05	0.02	0 40
R95B140	132	411	1 - 1.5	12	15.23	6.30	95.93
R95B140	132A	1	1 - 1.5	0.021 0.021	0.02	0.02	0.00

TABLE E-3 POST-REMEDIATION CONDITIONS PARCEL 17-3-10: 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

1- TO 2-FOOT DEPTH INCREMENT (CONT'D)

1. 1.12.6.00	e serven D	ione Coul	Sim			(10) (20) (00) (00)	Commercial to bor	rjo es (Frojekstrator) ar Froot	CITY OF OT
R95BZ156	133	119	1		1.5	3.2	4.41	3.20	14.11
R95BZ156	133A,133B	29	1	•	1.5	0.021	1.09	0.02	0.02
R95BZ172	134	3	1	-	1.5	44	0.11	44.00	4.74
R95BZ172	134A	25	1	-	1.5	0.021	0.92	0.02	0.02
R95BZ188	135	4	1	-	1.5	5.25	0 16	5.25	0.85
R95BZ188	135A	16	1	•_	1.5	0.021	0.58	0 02	0.01
R95C050	136	502	1.5	-	1.5	0.25 0.25	18,59	0.25	4.65
R95C075	137	568	1.5	-	1.5	0.50 0.30	21.04	0,40	8.41
R95C100	138	646	1	<u>:</u>	1.5	1.8	23.92	1.40	33.49
R95C125	139	381	1.5	-	1.5	0.021	14.11	0.02	0.30
R95C139	140A	24	1.5	-	1.5	0.021 0.021	0.91	0 02	0.02
R95C139	140	178	1.5	-	1.5	1.8 0.80	6.59	1.30	8.56
R95CZ149	141	71	1		1.5	9.5	2.63	9.50	25.01
R95CZ149	141A	48	1	-	1.5	0.021	1.77	0.02	0 04
R95CZ159	142	6	1		1.5	5.2	0.21	5.20	1.09
R95CZ159	142A	43	1	-	1.5	0.021	1.58	0.02	0.03
Totals:		11,716					433.91 Volume Weld	nted Average:	418.09

2- TO 3-FOOT DEPTH INCREMENT

Sample (D(s)	Polygon ID	Polygog Area s (eq fi.) se	Sam	ple ()	epth est	PCB Conc. (ppm)	Volume (cumulative)	Average PCB Concentration Per Foot	Average PCB Conc TIMES Total Volume
3B-SB-1	72	639	2	-	3	0.019	23.66	0.02	0.45
3B-SB-2	59	288	2	-	3	0.052	10.68	0.05	0.56
3B-SB-3	78_	6,184	2	-	3	0.0195	229.04	0.02	4.47
3B-SB-5	81	9	2	-	3	0.28	0.32	0.28	0.09
3B-SB-32	A08,08	96	2	-	3	1.16	3.56	1.16	4.13
R58AZ125	69	602	2	•	2.5	3.0	22.28	3.00	66.84
R58AZ134	70,70A	218	2	•	2.5	1.2	8.06	1.20	9.68
R58AZ134	70B	8	2	-	2.5	0.021	0.28	0.02	0.01
R95AZ156	74	1,405	2	-	2.5	1.55	52.03	1.55	80.65
R95AZ179	76,76A	362	2	-	2.5	4.0	13.40	4.00	53.60
R95AZ202	47,47A	25	2	-	2.5	15	0.92	15.00	13.75
R95BZ156	48,48B	510	2	-	2.5	0.40	18.91	0.40	7 56
R958Z156	48A	4	2	-	2.5	0.021	0.16	0.02	0.00
R95BZ172	49,49A	25	2	-	25	5.1	0.94	5 10	4.80
R95CZ149	50	1,078	2	-	2.5	3.0	39.93	3 00	119.79
R95CZ149	50A	66	2	-	2.5	0.021	2.43	0.02	0.05
R95CZ159	51	17	2	-	2.5	6.1	0.65	6.10	3.95
R95CZ159	51A	43	2	-	2.5	0.021	1.59	0.02	0.03
RB021565	52,52A	137	2	•	2.5	18	5.06	18.00	91.03
Totals:		11,715					433.88	-	461.41
							(** Controlume Weig	nted Average: #119 #1	2 W 1.06

Page 2 of 3

TABLE E-3 POST-REMEDIATION CONDITIONS PARCEL 17-3-10: 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

3- TO 4-FOOT DEPTH INCREMENT

Printing (- Polyson (15)	dodynady.com (Carre)				Colle (Com) a	Volume (cumulative)	Average PCB 38. Concentration Per Foot	AVERAGE - CE CON- TIMES TO SI VOLUTIO
3B-SB-1	32	761	3	-	4	0.019	28.20	0.02	0.54
3B-SB-2	14,14A	2,035	3	-	4	0.052	75.35	0.05	3.92
3B-SB-3	37	6,526	3	-	4	0.0195	241.72	0.02	4.71
3B-SB-5	35	233	3	-	4	0.28	8.62	0.28	2.41
3B-SB-32	39,39A	451	3	-	4	1.16	16.69	1.16	19.36
BS000118	30	26	3	-	3.5	3.7	0.97	3.70	3.57
BS000131	3,3A	63	3	-	3.5	3.15	2.35	3.15	7.39
BS000326	34	78	3	-	4	7	2.91	7.00	20.35
BS000327	23,23A	1,421	3	-	4	34	52.62	34.00	1,789.09
BS000327	23B	121	3		4	0.021	4.47	0.02	0.09
Totals:	**	11,715					433.88		1,851.42
							Volume Weig	hted Average:	4.27

4- TO 5-FOOT DEPTH INCREMENT

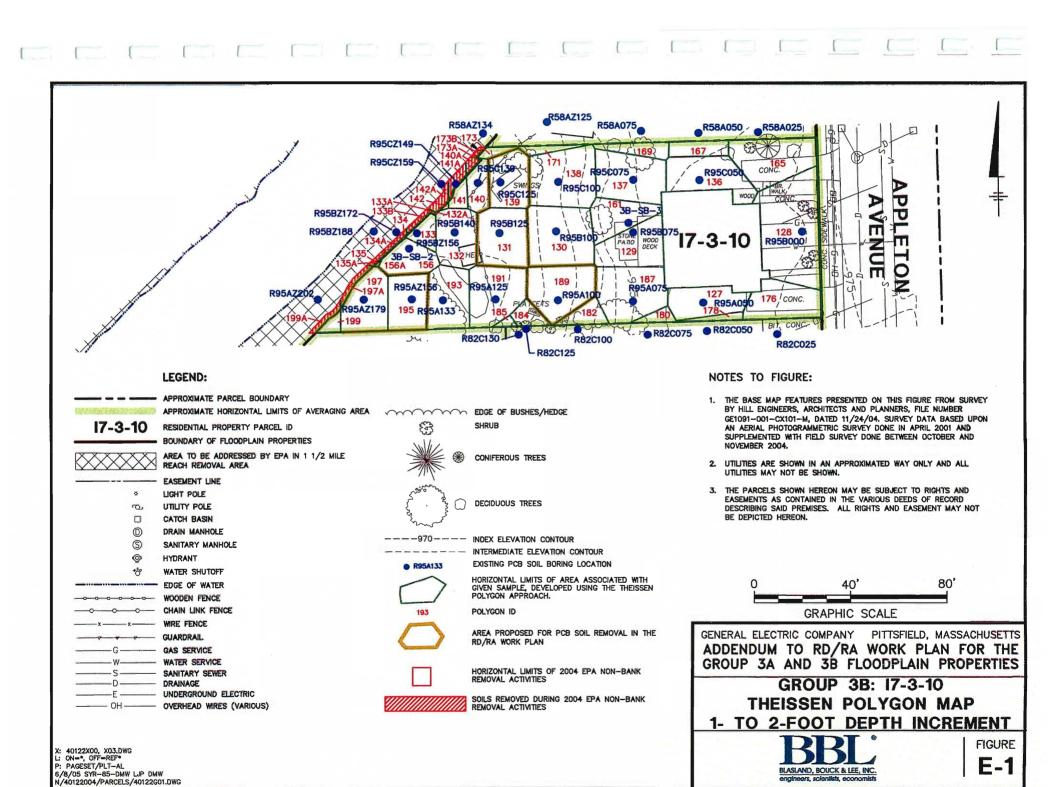
Sample ID(s)	Polygon ID	Polygon Area	Sam	ple De	ph	Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3B-SB-1	30	782	4	-	5	0.019	28.97	0.02	0.55
3B-SB-2	12,12A	2,035	4	•	5	0.018	75.35	0.02	1.36
3B-\$B-3	33	6,529	4	-	5	0.02	241.80	0.02	4.84
3B-SB-5	31	233	4	-	5	0.195	8.62	0.20	1.68
3B-SB-32	35,35A	451	4	-	5	0.42	16.69	0.42	7.01
BS000118	28	65	4	-	4.5	6.84	2.39	6.84	16.37
BS000131	2,2A	63	4	-	4.5	7.92	2.35	7.92	18 57
BS000327	21,21A	1,559	4	-	5	8.9	57.73	8.90	513.78
Totals:		11,715					433.90		564.15
			-				Volume Weig	hted Average:	1.30

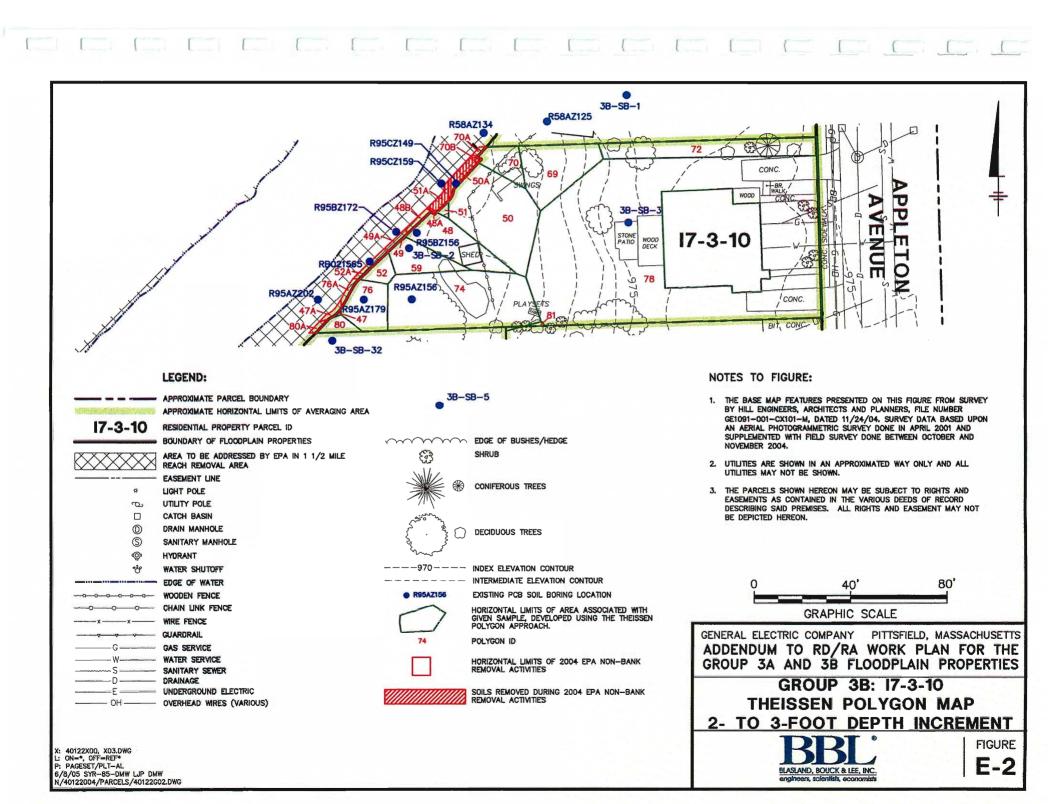
SUMMARY - 1- TO X-FOOT DEPTH INCREMENT

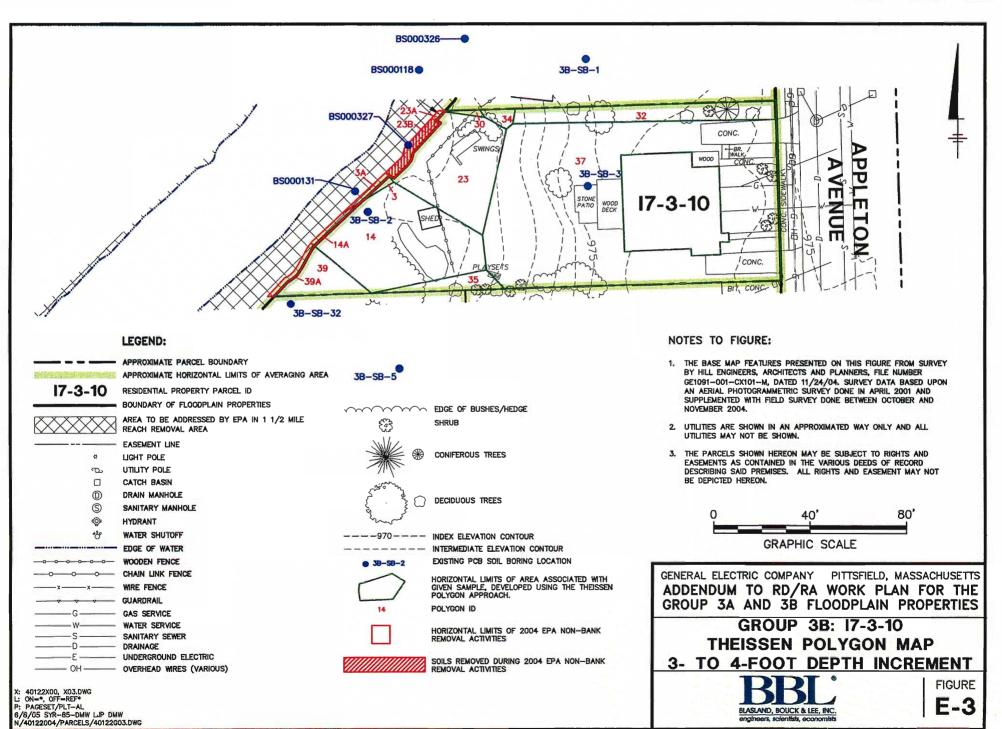
Sample ID(s)	Potygon ID	apolyodivatica gasaga	PCB CORC COPEN	Volume (cumulative) (cy)	verage PCB Concentration Par Foot	Average PCB Conc TIMES Total Volume
Totals:		11,715	 	1,735.58		3,295.07
			 	Volume Welg	hted Average:	1.90

Notes

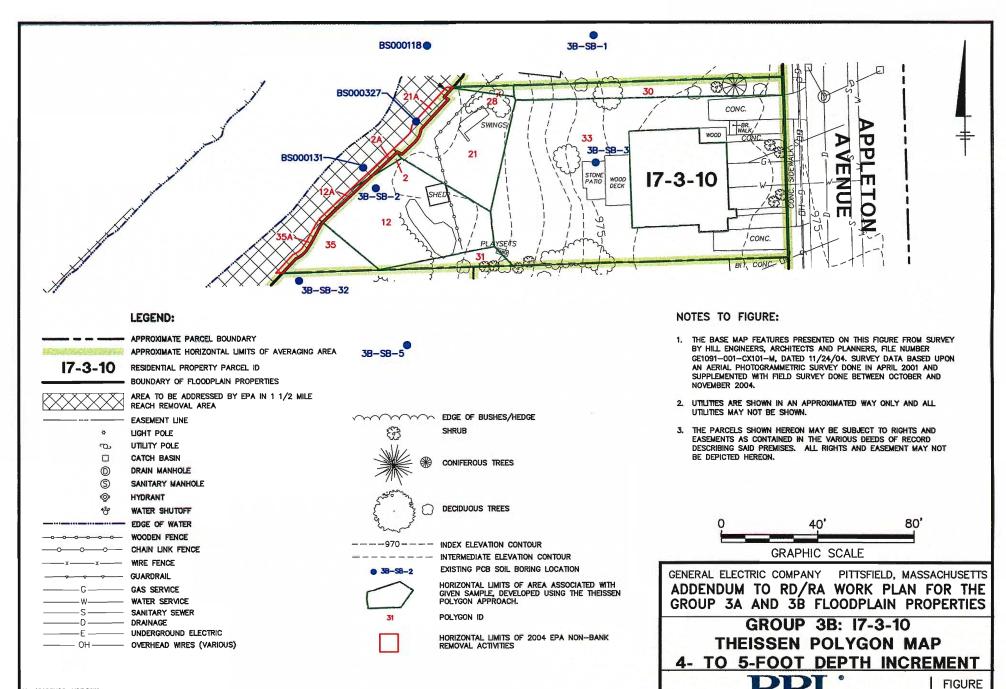
- 1. Non-detectable PCBs included as one-half the detection limit in calculations and shown in bold.
- 2. For instances where a duplicate sample was available, the average of the samples was included in table.
- 3. All calculations and rounding are performed by the computer software. Therefore, certain quantities in above table are displayed as rounded numbers for table clarity.
- 4. Shaded numbers in bold and italics represent the placement of clean backfill material following the performance of the proposed remediation. The backfill concentration corresponds to the average PCB concentration as presented in the CD Sites Backfill Data Set.







BLASLAND, BOUCK & LEE, INC.



BLASLAND, BOUCK & LEE, INC.

(: 40122X00, X03.DWG : ON=*, OFF=REF* P: PAGESET/PLT-AL

6/8/05 SYR-85-DMW LJP DMW N/40122004/PARCELS/40122G04.DWG

TABLE E-4 POST-REMEDIATION CONDITIONS PARCEL 17-2-35 (BACK): 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

1- TO 2-FOOT DEPTH INCREMENT

Sample (D(s)	Polygon ID	Polygon Area (eq. ft.)	Sample n Depth (ft.)	PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-6	905	148	1 - 2	0.022	5.48	0.02	0.12
3A-SB-6	905A	21	1 - 2	0.021	0.79	0.02	0.02
3A-SB-9	891	178	1 - 2	0.019	6.59	0.02	0 13
3A-SB-11	742B	141	1 - 2	0.0185	5.23	0 02	0 10
3A-SB-12	1005	24	1 - 2	0.0245	0.89	0.02	0.02
3A-SB-13	888	368	1 - 2	0.43	13.62	0.43	5.85
3A-SB-14	996	144	1 - 2	0.68	5.34	0.68	3.63
3A-SB-15	898	277	1 - 2	0 127	10.26	0.13	1.30
3A-SB-15	898A	34	1 - 2	0.021	1.25	0.02	0.03
R47B175	1019	10	1 - 1.5 1.5 - 2	0.25 0.25	0.37	0.25	0 09
R47B200	1020	31	1 - 1.5 1.5 - 2	0.3	1.14	0 25	0 29
R47B250	1022	58	1 - 1.5 15 - 2	0.35 0.35	2.13	0 35	0.75
R47BZ267	1023	40	1 - 1.5	0.8	1 48	0.80	1.19
R47C075	721	285	1 - 1.5 1.5 - 2	0.25 0.2	10.57	0.23	2.38
R47C100	726	314	1 - 15 1.5 - 2	0.1475 0.25	11.64	0.20	2.31
R47C125	731	501	1 - 1.5 1.5 - 2	0.25	- 18 56	0 23	4 18
R47C150	736	521	1 - 1.5 15 - 2	0.2 0.25	19.28	0 23	4.34
R47C175	740	520	1 - 1.5 1.5 - 2	0.2	19.26	0.26	3.85
R47C200	745	605	1 - 1.5 1.5 - 2	0.4	22.40	0.30	6.72
R47C225	748	633	1 - 15 1.5 - 2	1.5	23 43	1.30	30 46
R47C250	751	383	1 - 1.5 1.5 - 2	1.4 0.3	14 17	0 85	12.04
R47C259	752	298	1 - 1.5	6 6.7	11.02	6.35	69.99
R47CZ269	760	288	1 - 1.5	2.8	10.67	2.80	29.87
R47CZ269	760A	11	1 - 15	0.021	0.42	0.02	0.01
R47CZ279	1113,1113A	62	1 - 15	0.021	2.29	0.02	0.05
R47D075	720	417	1 - 1.5 1.5 - 2	0.2 0.25	15.45	0 23	3,48
R47D100	725	606	1 - 1.5 15 - 2	0.3	22.45	0 30	6 74
R47D125	730	65C	1.5 - 2	1.5 0.695	24.07	1,10	26.42
R47D150	735	579	1 - 1.5 1.5 - 2	0.25 0.3	21.46	0.28	5.90
R47D175	739	579	1 - 1.5	5 5 3 7	21 45	4.60	98 66
R47D200	743	503	1 - 1.5 1.5 - 2	0.265 0.3	18 61	0 28	5 26
R47D225	747	505	1 - 1.5 15 - 2	0.5 0.4	18.70	0 45	8 41
R47D250	749	274	1 - 1.5 1.5 - 2	0.5 0.8	10.14	0.65	6.59
R47D255	750	240	1 - 15 1.5 - 2	0.8	8.89	0.90	8.00
R47DZ263	759	202	1 - 1.5	1 4	7.49	1.40	10.49

TABLE E-4 POST-REMEDIATION CONDITIONS PARCEL 17-2-35 (BACK): 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

1- TO 2-FOOT DEPTH INCREMENT (con't)

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ff.)	PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
R47DZ263	759A	2	1 - 1.5	0.021	0.09	0.02	0.00
R47DZ271	1131	36	1 - 15	55	1.32	55.00	72.66
R47DZ271	1131A	42	1 - 1.5	0.021	1 55	0.02	0.03
R47E075	719	674	1 - 1.5	0.3	24.98	0.25	6.18
K47E075	719	074	1.5 - 2	0.195	24.90	0.25	0.10
R47E100	724	578	1 - 1.5	0.25	21.42	0.28	5.89
K4/E100	724	5/6	1.5 - 2	0.3	21.42	0.20	5.09
R47E125	727	581	1 - 1.5	0.25	21.51	0.25	5.38
K4/E125	721	301	1.5 - 2	0.25	21.51	0 25	3.36
R47E150	733	598	1 - 1.5	0.3	22.15	0 30	6.65
K47E130	/33	350	1.5 - 2	0.3	22.13		0.03
R47E175	738	623	1 - 1.5	0.5	23 07	0 35	8 07
	736	023	1.5 - 2	0.2	2501	5 55	
R47E200	741	406	1 - 1.5	0.3	15.05	0.30	4 51
K41 E200	(4)	400	1.5 - 2	03	15.05	0.30	4 31
R47E212	744	337	1 - 1.5	3	12.48	3.73	46.50
1/4/ 22/2		551	1.5 - 2	4.45	12,40	5.75	40.50
R47EZ228	757	73	1 - 1.5	0.021	2 69	0.02	0.06
R47EZ228	757A	281	1 - 1.5	1.1	10.41	1.10	11.45
R47EZ244	758	92	1 - 1.5	0.021	3.40	0.02	0.07
R47EZ244	758A	115	1 1.5	68.5	4.25	68,50	290.85
R47EZ260	988	49	1 - 1.5	0.021	1.82	0 02	0.04
R80A170	994	65	1 - 1.5	0.4	2.41	0 30	0.72
1100/11/0	, , , , , , , , , , , , , , , , , , ,		1.5 - 2	0.2	4.71		
R80B150	995	71	1 - 15	0.23	2.63	0.27	0.70
1000100	300	, ,	1.5 - 2	0.3	2.03	Ü.27	L
Totals:		15,072			558.24		819 43
				-	Volume Weig	hted Average:	1,47

2- TO 3-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)		mple oth (ft.		PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-6	377.377A	170	2	-	3	0.057	6.29	0.06	0 36
3A-SB-9	393	2,207	2	. :	3	0.02	81.73	0.02	1 63
3A-SB-11	370	2,453	2	-	3	0.018	90.84	0.02	1 64
3A-SB-12	444	932	2	- :	3	0.023	34.50	0.02	0.79
3A-SB-13	355	3,131	2	- :	3	0.02	115.98	0.02	2.32
3A-SB-14	442	2,173	2	-	3	0.018	80.49	0.02	1.45
3A-SB-15	367,367A	475	2	- :	3	0.0245	17.60	0.02	0.43
3A-SB-17	441	300	2	-	3	0.173	11.09	0 17	1.92
R47AZ230	451	41	2	. 2	.5	0.2	1.52	0 20	0.30
R47BZ267	452	331	2	- 2	.5	4	12.25	4 00	48 99
R47CZ269	326.326A	676	2	- 2	.5	0.4	25.03	0.40	10.01
R47CZ279	496A	35	2	- 2	5	361	1.30	361.00	468.77
R47CZ279	496	27	2	- 2	.5	0.021	0.99	0 02	0 02
R47DZ263	325,325A	638	2	- 2	.5	2 4	23.64	2.40	56.73
R47DZ271	509,509A	78	2	- 2	.5	61	2 87	61 00	175 23
R47EZ228	323	640	2	- 2	.5	0.7	23.71	0.70	16.60
R47EZ228	323A	73	2	- 2	.5	0.021	2 69	0.02	0.06
R47EZ244	324	115	2	- 2	.5	20	4.25	20.00	84.92
R47EZ244	324A	92	2	- 2	.5	0.021	3.40	0 02	0.07
R47EZ260	437	49	2	- 2	.5	0.021	1,81	0 02	0.04
R80AZ203	440	439	2	- 2	.5	2.6	16.26	2 60	42.27
Totals:		15,072			1		558.24		914.54
L	L	· · · · · · · · · · · · · · · · · · ·					Volume Weigi	nted Average:	1.64

TABLE E-4 POST-REMEDIATION CONDITIONS PARCEL 17-2-35 (BACK): 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

3- TO 4-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (eq. ft.)	Sar Dep	nple h (ft.)	PCB - Conc (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-6	228,228A	553	3	- 4	0.057	20 47	0.06	1.17
3A-SB-9	241	2,207	3	- 4	0.02	81 73	0.02	1.63
3A-SB-11	221	2,453	3	- 4	0.01B	90 84	0.02	1 64
3A-SB-12	284	932	3	- 4	0.023	34.50	0.02	0.79
3A-SB-13	206	3,975	3	- 4	0.02	147.21	0.02	2 94
3A-SB-14	282	2,173	3	- 4	0.018	80.49	0.02	1 45
3A-SB-15	218,218A	1,197	3	- 4	0.0245	44.34	0.02	1.09
3A-SB-17	281	593	3	- 4	0.173	21.96	0.17	3.80
3A-SB-26	279	66	3	- 4	10.9	2.46	10 90	26.82
B\$000297	327,327A	669	3	- 4	77	24.77	77.00	1,907.29
BS000298	326,326A	68	3	- 4	160	2.52	160.00	403.73
BS000299	278	188	3	- 4	0.021	6.95	0 02	0.15
Totals:		15,073	1			558 24		2,352,50
						Volume Weig	hted Average:	4.21

4- TO 5-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)		ampk pth (f		PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-6	242,242A	553	4	-	5	0.0225	20.47	0.02	0 46
3A-SB-9	222	2,207	4		5	0.0195	81.73	0.02	1 59
3A-SB-11	235	2,453	4	-	5	0.01875	90.84	0.02	1 70
3A-SB-12	296	932	4	-	5	0.019	34.50	0.02	0.66
3A-SB-13	219	3,974	4	-	5	0.024	147.20	0 02	3 53
3A-SB-14	294	2,173	4	-	5	0.018	80.49	0.02	1.45
3A-SB-15	232,232A	1,190	4		5	7.1	44.06	7 10	312.84
3A-SB-17	293	593	4	-	5	0.385	21.96	0 39	8.45
3A-SB-26	291	55	4		5	0.3	2.02	0.30	0.64
BS000126	287	21	4	-	4.5	2.52	0.76	2.52	1.92
BS000127	290	18	4	-	4.5	9.59	0.68	9.59	6.53
B\$000297	340,340A	669	4	-	5	14	24 77	14.00	346.78
BS000298	339,339A	68	4	-	5	21	2.52	21.00	52.99
BS000299	289	169	4		5	98	6.24	98 00	611.70
Totals:		15,073					558.24		1,351.21
							Volume Weigl	2.42	

5- TO 6-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	S De	ampl pth (i	e R.)	PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-6	232,232A	553	5	-	6	0.0225	20.47	0.02	0.46
3A-SB-9	244	2.207	5	-	6	0.0195	81.73	0.02	1.59
3A-SB-11	225	2.453	5		6	0.01875	90 84	0.02	1.70
3A-SB-12	287	932	5	-	6	0.019	34.50	0.02	0.66
3A-SB-13	211	3,976	5	-	6	0.024	147.27	0.02	3.53
3A-SB-14	285	2,173	5	-	6	0.018	80.49	0.02	1 45
3A-SB-15	222,222A	1,330	5		6	7.1	49.26	7.10	349.73
3A-SB-17	284	593	5	-	6	0.385	21.96	0.39	8.45
3A-SB-26	282	55	5		6	0.3	2 02	0 30	0.61
BS000126	280	69	5		5.5	0.858	2 57	0.86	2.21
BS000127	281	59	5	·	5.5	12.4	2.19	12.40	27.20
BS000297	328,328A	674	5		6	10	24.95	10.00	249.46
Totals:		15,073					558 24		647.06
							*** Volume Weig	nted Average:	1.16

TABLE E-4

POST-REMEDIATION CONDITIONS

PARCEL 17-2-35 (BACK): 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

SUMMARY - 1- TO X-FOOT DEPTH INCREMENT

Sample (D(s)	Polygon ID	Polygon Area (eq fL)	Sample	PCB Conc (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
Totals:		15,072			2,791.20		6,084.74
					Volume Welgi	hted Average:	2.18

Notes

- 1. Non-detectable PCBs included as one-half the detection limit in calculations and shown in bold.
- 2. For instances where a duplicate sample was available, the average of the samples was included in table.
- 3. All calculations and rounding are performed by the computer software. Therefore, certain quantities in above table are displayed as rounded numbers for table clarity.
- 4. Shaded numbers in bold and italics represent the placement of clean backfill material following the performance of the proposed remediation. The backfill concentration corresponds to the average PCB concentration as presented in the CD Sites Backfill Data Set.

TABLE E-5 POST-REMEDIATION CONDITIONS (with additional removal) PARCEL 17-2-35 (BACK): 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

1- TO 2-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (aq. ft.)	Sample Depth (ft.)	PCB Conc. (ppm)	Volume (cumulative) (Cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-6	905	148	1 - 2	0.022	5.48	0.02	0 12
3A-SB-6	905A	21	1 - 2	0.021	0.79	0.02	0 02
3A-S8-9	891	178	1 - 2	0.019	6.59	0.02	0 13
3A-SB-11	742B	141	1 - 2	0.0185	5.23	0.02	0.10
3A-SB-12	1005	24	1 - 2	0.0245	0.89	0 02	0.02
3A-SB-13	888	368	1 - 2	0.43	13 62	0.43	5.85
3A-SB-14	996	144	1 - 2	0 68	5.34	0 68	3.63
3A-SB-15	898	277	1 - 2	0.127	10.26	0 13	1.30
3A-SB-15	898A	34	1 - 2	0.021	1 25	0 02	0.03
R47B175	1019	10	1 - 1.5 1.5 - 2	0.25 0.25	0 37	0 25	0.09
R47B200	1020	31	1 - 1.5 1.5 - 2	0.3	1.14	0 25	0 29
R47B250	1022	58	1 - 15	0.35 0.35	2.13	0.35	0 75
R47BZ267	1023	40	1 - 1.5	0.8	1.48	0.80	1 19
R47C075	721	285	1 - 1.5	0.25	10 57	0.23	2.38
R47C100	726	314	1.5 - 2 1 - 1.5 1.5 - 2	0.2 0.1475 0.25	11 64	0.20	2.31
R47C125	731	501	1 - 1.5	0.25	18 56	0 23	4.18
R47C150	736	521	1.5 - 2 1 - 1.5 1.5 - 2	0.2	19.28	0 23	4.34
R47C175	740	520	1 - 1.5	0.2	19.26	C 20	3 85
R47C200	745	605	1 - 1.5	0.4	22.40	0 30	6 72
R47C225	748	633	1 - 1.5 1.5 - 2	1.1	23.43	1.30	30.46
R47C250	751	383	1 - 1.5 1.5 - 2	1.4	14 17	0.85	12.04
R47C259	752	298	1 - 1.5 1.5 - 2	6.7	11.02	6.35	69 99
R47CZ269	760	288	1 - 1.5	2.8	10.67	2 80	29 87
R47CZ269	760A	11	1 - 1.5	0.021	0 42	0 02	0.01
R47CZ279	1113,1113A	62	1 - 1.5	0.021	2.29	0 02	0.05
R47D075	720	417	1 - 1.5 1.5 - 2	0.2 0.25	15.45	0.23	3,48
R47D100	725	606	1 - 15 1.5 - 2	0.3	22.45	0.30	6 74
R47D125	730	650	1 - 1.5 1.5 - 2	1.5 0.695	24 07	1.10	26.42
R47D150	735	579	1 - 1.5 1.5 - 2	0.25	21 46	0.28	5.90
R47D175	739	579	1 - 1.5 1.5 - 2	5.5 3.7	21.45	4 60	98 66
R47D200	743	503	1 - 1.5 1.5 - 2	0,265 0.3	18.61	0 28	5,26
R47D225	747	505	1 - 1.5 1.5 - 2	0.5 0.4	18.70	C 45	8.41
R47D250	749	274	1 - 1.5 1.5 - 2	0.5 0.8	10.14	0.65	6 59
R47D255	750	240	1 - 1.5 1.5 - 2	0.8	8.89	0.90	8 00

TABLE E-5 POST-REMEDIATION CONDITIONS (with additional removal) PARCEL 17-2-35 (BACK): 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

1- TO 2-FOOT DEPTH INCREMENT (con't)

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample (C Depth (ft.)	PCB Conc. (ppm)	Vojume (cumulative)	Average PCB Concentration Per Foot	Average PCB Conc TIMES Total Volume
R47DZ263	759	202	1 - 1.5	1.4	7.49	1.40	10.49
R47DZ263	759A	2	1 - 1.5	0.021	0.09	0.02	0.00
R47DZ271	1131	36	1 - 1.5	55	1.32	55 00	72 66
R47DZ271	1131A	42	1 - 1.5	0.021	1.55	0.02	0.03
R47E075	719	674	1 - 1.5	0.3	24.98	0.25	6.18
			1.5 - 2	0.195 0.25			
R47E100	724	578	1.5 - 2	0.3	21.42	0.28	5 89
R47E125	727	581	1 - 1.5	0.25	21.51	0 25	5 38
			1.5 - 2	0.25			
R47E150	733	598	1.5 - 2	0.3	22.15	0 30	6.65
			1.5 - 2	0.5		0 25	
R47E175	738	623	1.5 - 2	0.2	23.07		8.07
R47E200	741	406	1 - 1.5	0.3	15.05	0.30	4.51
			1.5 - 2	0.3			
R47E212	744	337	1 - 1.5	3 4.45	12.48	3.73	46.50
R47EZ228	757	73	1.5 - 2	0.021	2 69	0.02	0.06
R47EZ228	757A	281	1 - 15	1.1	10.41	1.10	11.45
R47EZ244	758	92	1 - 1.5	0.021	3.40	0.02	0 07
R47EZ244	758A	115	1 - 1.5	0.021	4.25	0.02	0.09
R47EZ260	988	49	1 - 1.5	0.021	1 82	0.02	0 04
R80A170	994	65	1 - 1.5	0.4	2 41	0 30	0.72
	005		1.5 - 2	0.2	0.00		0.70
R80B150	995	71	1.5 - 2	0.3	2.63	0 27	0.70
Totals:		15,072	-		558.24		528 67
		<u> </u>			Volume Welg	hted Average:	0.95

2- TO 3-FOOT DEPTH INCREMENT

2: Sample ID(s)	ag - Polygon ID	Polygon Area		impl oth (1		PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-6	377,377A	170	2	-	3	0.057	6.29	0.06	0.36
3A-SB-9	393	2.207	2	-	3	0.02	81.73	0.02	1 63
3A-SB-11	370	2.453	2	•	3	0.018	90.84	0 02	1.64
3A-SB-12	444	932	2	-	3	0.023	34.50	0 02	0.79
3A-SB-13	355	3,131	2	•	3	0.02	115 98	0.02	2.32
3A-SB-14	442	2,173	2	-	3	0.018	80.49	0.02	1.45
3A-SB-15	367,367A	475	2	-	3	0.0245	17.60	0.02	0.43
3A-SB-17	441	300	2	-	3	0.173	11 09	0.17	1.92
R47AZ230	451	41	2	-	25	0.2	1.52	0.20	0.30
R47BZ267	452	331	2	-	25	4	12.25	4.00	48 99
R47CZ269	326,326A	676	2	-	2.5	0.4	25.03	0.40	10.01
R47CZ279	496A	35	2		2.5	0.021	1.30	0.02	0.03
R47CZ279	496	27	2	-	2.5	0.021	0 99	0.02	0 02
R47DZ263	325,325A	638	2	-	2.5	2.4	23.64	2 40	56.73
R47DZ271	509,509A	78	2		2.5	61	2 87	61,00	175.23
R47EZ228	323	640	2	-	2.5	0.7	23.71	0 70	16.60
R47EZ228	323A	73	2		2.5	0.021	2.69	0.02	0.06
R47EZ244	324	115	2	-	2.5	20	4.25	20.00	84.92
R47EZ244	324A	92	2	-	2.5	0.021	3.40	0.02	0 07
R47EZ260	437	49	2		2.5	0.021	1.81	0.02	0.04
R80AZ203	440	439	2		2.5	2.6	16.26	2.60	42.27
Totals:	-	15,072					558.24		445.80
	·	· · · · · · · · · · · · · · · · · · ·					Volume Weig	nted Average:	公学是10.80 年少

TABLE E-5

POST-REMEDIATION CONDITIONS (with additional removal) PARCEL I7-2-35 (BACK): 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

3- TO 4-FOOT DEPTH INCREMENT

Sample (D(a)	Polygon ID	Polygon Area (sq. ft.)		ampl pth (Conc. (ppm)	Yourne (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-6	228,228A	553	3	-	4	0.057	20.47	0.06	1,17
3A-SB-9	241	2,207	3	-	4	0.02	81.73	0.02	1.63
3A-SB-11	221	2,453	3	-	4	0.018	90.84	0.02	1 64
3A-SB-12	284	932	3	-	4	0.023	34.50	0 02	0.79
3A-SB-13	206	3,975	3	-	4	0.02	147.21	0 02	2.94
3A-SB-14	282	2,173	3	-	4	0.018	80 49	0.02	1.45
3A-SB-15	218,218A	1,197	3	-	4	0.0245	44 34	0.02	1 09
3A-SB-17	281	593	3	-	4	0 173	21.96	0.17	3.80
3A-SB-26	279	66	3	-	4	10.9	2 46	10 90	26.82
BS000297	327,327A	669	3	-	4	77	24.77	77 00	1.907.29
BS000298	326,326A	68	3	-	4	160	2.52	160.00	403.73
BS000299	278	188	3	-	4	0.021	6.95	0.02	0.15
Totals:		15,073					558 24		2 352.50
							Volume Welg	hted Average:	4.21

4- TO 5-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)		ample pth (ft.		PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-6	242,242A	553	4		5	0.0225	20.47	0.02	0.46
3A-SB-9	222	2,207	4	- ;	5	0.0195	81 73	0.02	1.59
3A-SB-11	235	2,453	4	- !	5 0	0.01875	90 84	0.02	1.70
3A-SB-12	296	932	4	- :	5	0.019	34.50	0.02	0.66
3A-SB-13	219	3,974	4	- :	5	0.024	147.20	0.02	3 53
3A-SB-14	294	2,173	4	- :	5	0.018	80.49	0 02	1.45
3A-SB-15	232,232A	1,190	4	- ;	5	7.1	44.06	7 10	312 84
3A-SB-17	293	593	4	- :	5	0.385	21 96	C 39	8.45
3A-SB-26	291	55	4	- :	5	0,3	2.02	0.30	0.61
BS000126	297	21	4	- 4	.5	2.52	0.76	2.52	1.92
BS000127	290	18	4	- 4	.5	9.59	0 68	9.59	6 53
BS000297	340,340A	669	4	- :	5	14	24.77	14 00	346.78
BS000298	339,339A	68	4	- :	5	21	2.52	21.00	52.99
BS000299	289	169	4	- :	5	98	6.24	98.00	611.70
Totals:		15,073					558.24		1,351.21
							Volume Weig	hted Average:	2.42

5- TO 6-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	S De	ample pth (ft.)	PCB of Conc. (ppm)	Volume (cumulative)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
3A-SB-6	232,232A	553	5	- 6	0.0225	20 47	0.02	0.46
3A-SB-9	244	2.207	5	- 6	0.0195	81.73	0.02	1.59
3A-SB-11	225	2,453	5	- 6	0.01875	90.84	0.02	1 70
3A-SB-12	287	932	5	- 6	0.019	34.50	0.02	0.66
3A-SB-13	211	3,976	5	- 6	0.024	147 27	0 02	3.53
3A-SB-14	285	2,173	5	- 6	0.018	80.49	0.02	1.45
3A-SB-15	222,222A	1,330	5	- 6	7,1	49.26	7.10	349.73
3A-SB-17	284	593	5	- 6	0.385	21 96	0.39	8.45
3A-SB-26	282	55	5	- 6	0.3	2.02	0.30	0.61
BS000126	280	69	5	- 55	0 858	2 57	0.86	2 21
BS000127	281	59	5	- 5.5	12.4	2.19	12.40	27.20
BS000297	328,328A	674	5	- 6	10	24.95	10.00	249 46
Totals:		15,073				558.24		647.06
			•			Volume Weigi	hted Average:	1.16

TABLE E-5

POST-REMEDIATION CONDITIONS (with additional removal) PARCEL I7-2-35 (BACK): 1- TO X-FOOT DEPTH INCREMENT

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

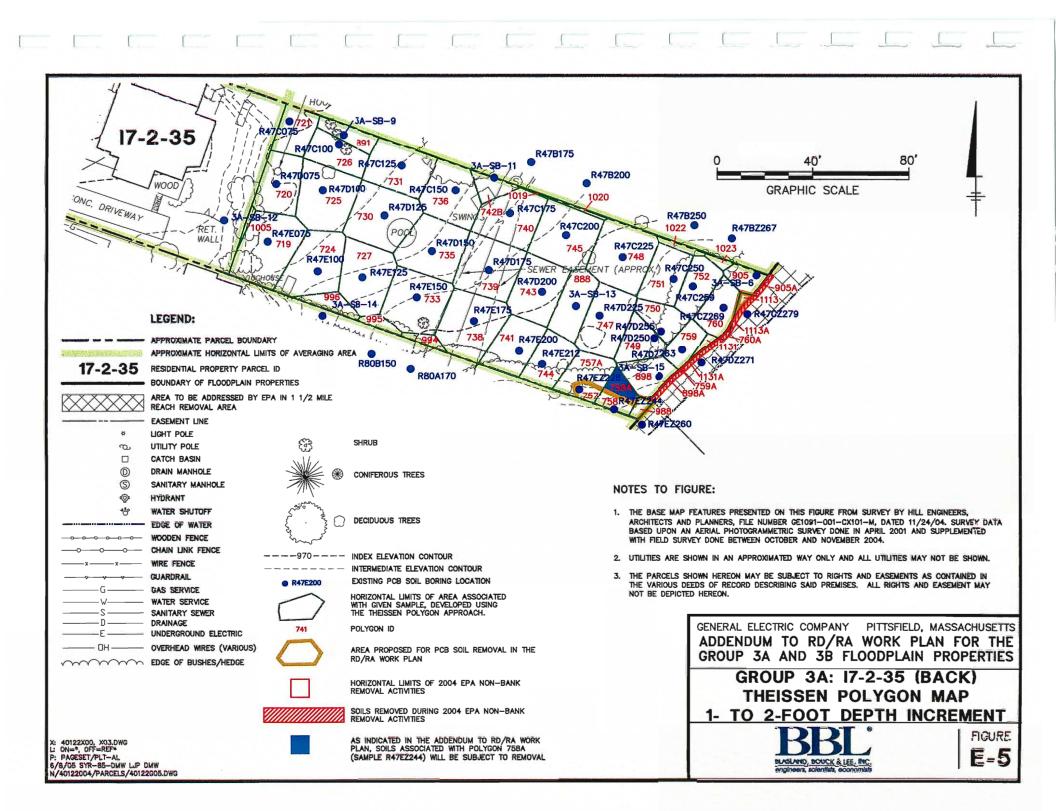
SUMMARY - 1- TO X-FOOT DEPTH INCREMENT

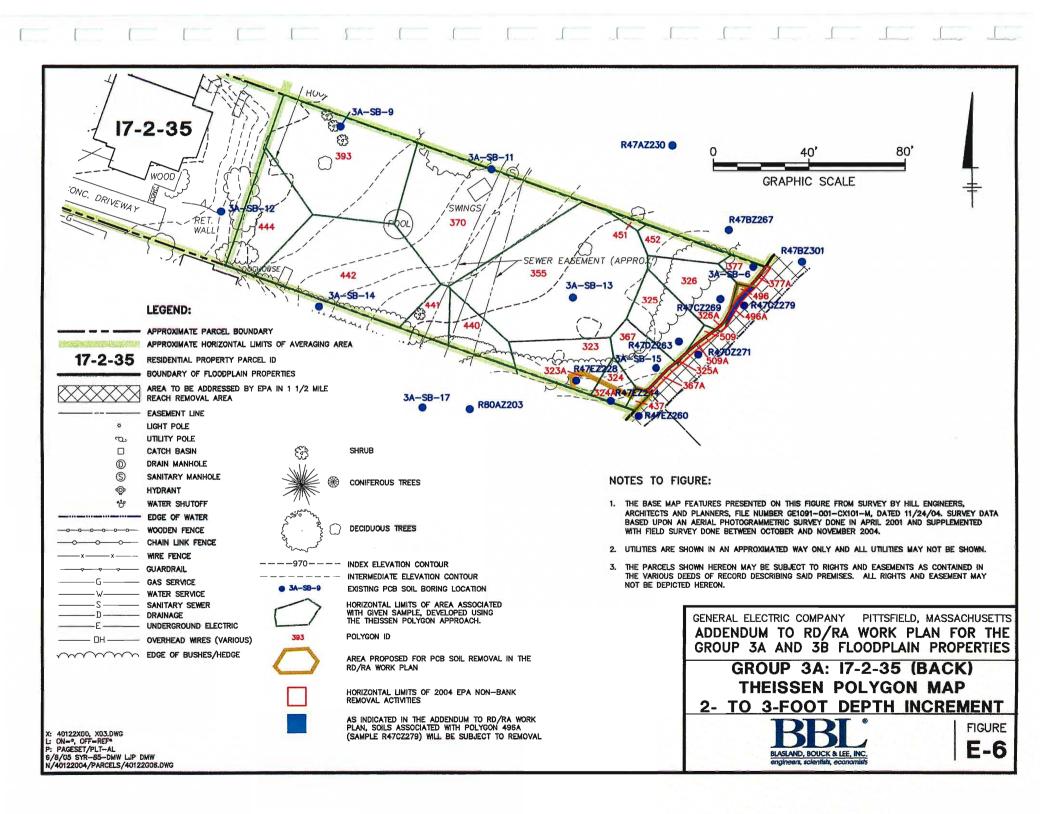
Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)		Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
Totals:		15,072		2,791.20		5,325.24
				Volume Welg	hted Average:	1.91

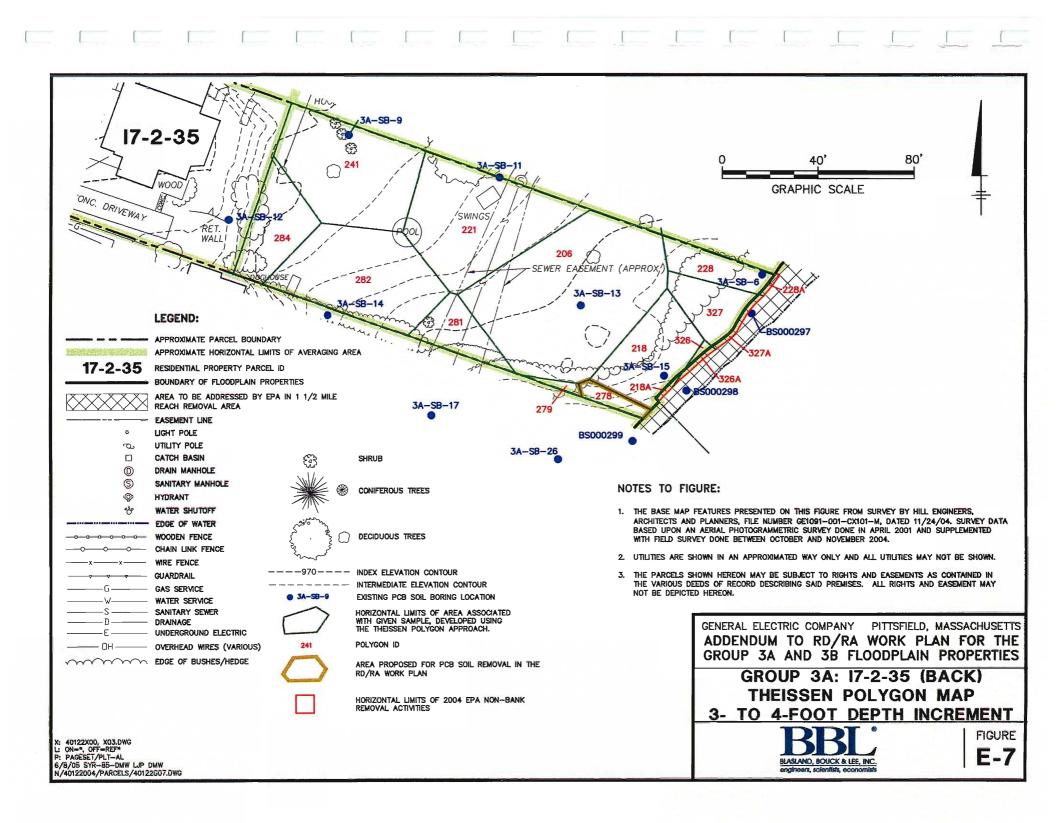
Notes:

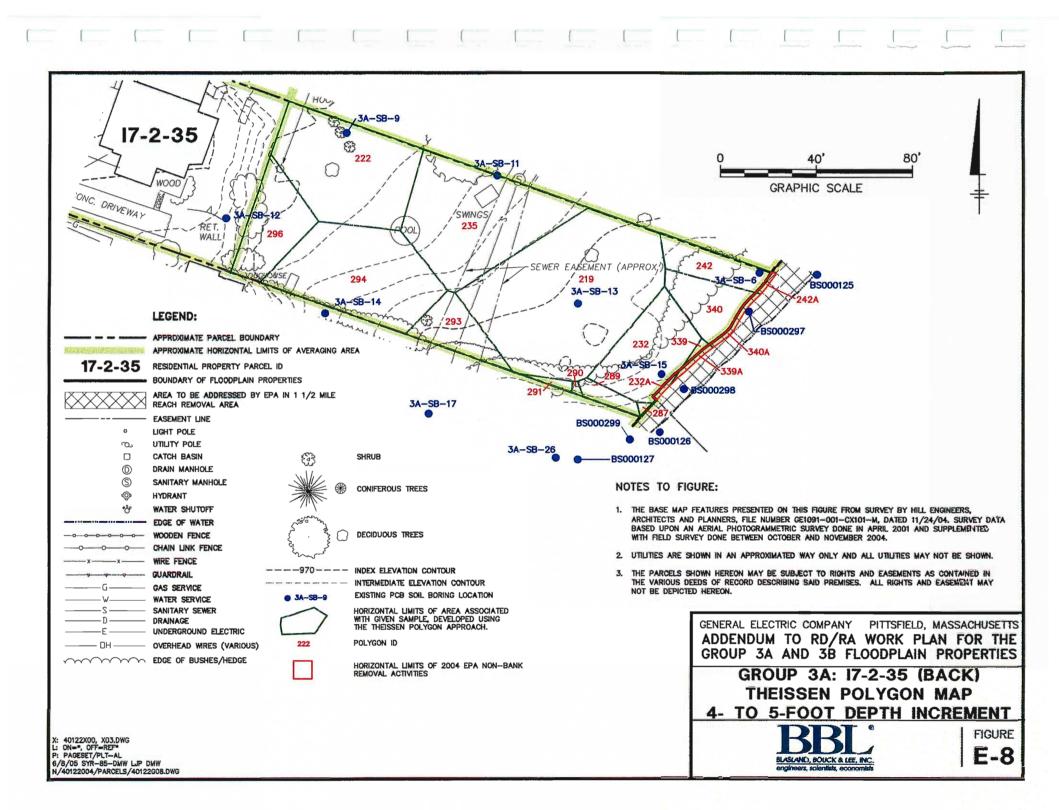
- 1. Non-detectable PCBs included as one-half the detection limit in calculations and shown in bold
- 2 For instances where a duplicate sample was available, the average of the samples was included in table
- 3. All calculations and rounding are performed by the computer software. Therefore, certain quantities in above table are displayed as rounded numbers for table clarity.
- 4. Shaded numbers in bold and italics represent the placement of clean backfill material following the performance of the proposed remediation.

 The backfill concentration corresponds to the average PCB concentration as presented in the CD Sites Backfill Data Set









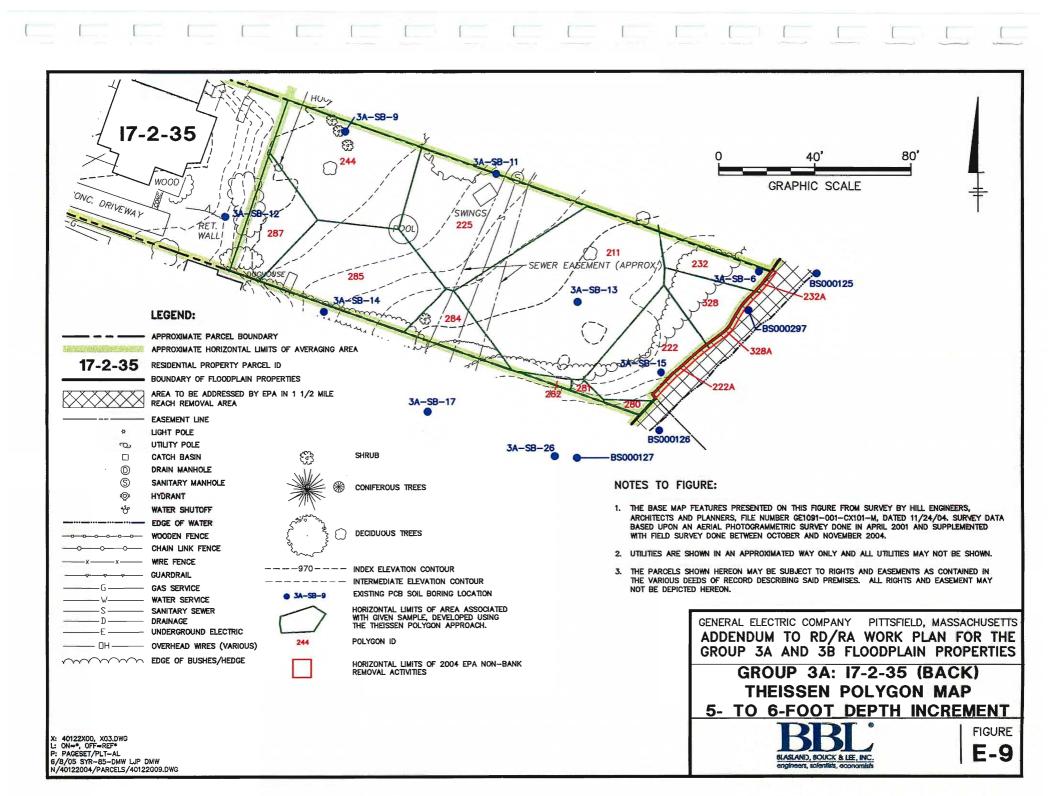


TABLE E-6 NON-PCB ANALYTICAL RESULTS FOR SAMPLE RB021541

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in dry weight parts per million, ppm)

Location ID: Sample Depth(Feet): Parameter Date Collected:	Method 1 Wave 2 S-1	RB021541 0-0.5	Constituent Exceeds Method 1 Wave 2 S-1
	Standards	11/02/98	Standard ?
Semivolatile Organics			
1,2,4-Trichlorobenzene	70	0.049 J	No No
1,4-Dichlorobenzene	4	0.067 J	No
2-Methylnaphthalene	10	0.063 J	No No
Acenaphthene	1000	0.090 J	No No
Acenaphthylene	20	0.042 J	No
Anthracene	1000	0.20 J	No
Benzo(a)anthracene	7	0.76	No
Benzo(a)pyrene	2	0.71	No No
Benzo(b)fluoranthene	7	0.60 J	No
Benzo(g,h,i)perylene	1000	0.57	No No
Benzo(k)fluoranthene	70	0.72	No
Butylbenzylphthalate	Not Listed	0.66	NA NA
Chrysene	700	0.86	No No
Dibenzo(a,h)anthracene	0.7	0.15 J	No No
Dibenzofuran	Not Listed	0.061 J	NA NA
Fluoranthene	1000	1.6	No
Fluorene	1000	0.12 J	No No
Indeno(1,2,3-cd)pyrene	7	0.56	No
Naphthalene	40	0.14 J	No
Pentachlorobenzene	Not Listed	0.036 J	NA NA
Phenanthrene	500	1.0	No
Pyrene	1000	1.6	No
Organochlorine Pesticides			
None Detected	-	-	-
Herbicides			
None Detected	~		_
Furans			
2,3,7,8-TCDF	Not Applicable	0.000037	NA NA
TCDFs (total)	Not Applicable	0.00038 J	NA NA
1,2,3,7,8-PeCDF	Not Applicable	0.000019	NA NA
2,3,4,7,8-PeCDF	Not Applicable	0.000034	NA NA
PeCDFs (total)	Not Applicable	0.0014 J	NA NA
1,2,3,4,7,8-HxCDF	Not Applicable	0.000046	NA NA
1,2,3,6,7,8-HxCDF	Not Applicable	0.000036	NA NA
1,2,3,7,8,9-HxCDF	Not Applicable	0.0000067	NA NA
2,3,4,6,7,8-HxCDF	Not Applicable	0.000021	NA NA
HxCDFs (total)	Not Applicable	0.0012 J	NA NA
1,2,3,4,6,7,8-HpCDF	Not Applicable	0.00038 J	NA NA
1,2,3,4,7,8,9-HpCDF	Not Applicable	0.000025	NA NA
HpCDFs (total)	Not Applicable	0.00090 J	NA NA
OCDF	Not Applicable	0.00098	NA NA
Dioxins	Not replicable	0.00000	1No
2,3,7,8-TCDD	Not Applicable	0.0000011	NA.
		0.000017	NA NA
TCDDs (total)	Not Applicable		NA NA
1,2,3,7,8-PeCDD	Not Applicable	0.0000028 J	
PeCDDs (total)	Not Applicable	0.000024 J	NA NA
1,2,3,4,7,8-HxCDD	Not Applicable	0.0000044	NA NA
12267844000	Not Applicable	0.000012	NA NA
1,2,3,6,7,8-HxCDD		0.000000	
1,2,3,7,8,9-HxCDD	Not Applicable	0.0000062	NA NA
1,2,3,7,8,9-HxCDD HxCDDs (total)	Not Applicable Not Applicable	0.00011	NA NA
1,2,3,7,8,9-HxCDD HxCDDs (total) 1,2,3,4,6,7,8-HpCDD	Not Applicable Not Applicable Not Applicable	0.00011 0.00024	NA NA
1,2,3,7,8,9-HxCDD	Not Applicable Not Applicable	0.00011	NA NA

TABLE E-6 NON-PCB ANALYTICAL RESULTS FOR SAMPLE RB021541

ADDENDUM TO RD/RA WORK PLAN FOR THE GROUP 3A AND 3B FLOODPLAIN PROPERTIES GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in dry weight parts per million, ppm)

Location ID: Sample Depth(Feet): Parameter Date Collected:	Method 1 Wave 2 S-1 Standards	RB021541 0-0.5 11/02/98	Constituent Exceeds Method 1 Wave 2 S-1 Standard ?
Inorganics			
Arsenic	20	2.60	No
Barium	1000	34.8	No
Chromium	30	13.5	No
Cobalt	Not Listed	7.10	NA NA
Copper	Not Listed	22.4	NA NA
Lead	300	35.5 J	No
Mercury	20	0.170	No
Nickel	20	12.1	No
Selenium	400	0.710 J	No
Silver	100	0.180	No
Thallium	8	0.870	No
Tin	Not Listed	2.40	NA NA
Vanadium	600	11.5	No
Zinc	2500	79.7 J	No

Notes

- Sample collection and analysis performed by United States Environmental Protection Agency (EPA) Subcontractors. Results provided to GE under a Data Exchange Agreement between GE and EPA.
- 2. Only detected constituents are sumarized.
- 3. Indicates that all constituents for the parameter group were not detected.
- 4. NA = Not Applicable, no Method 1 standard available.

Data Qualifiers:

J - Estimated Value.